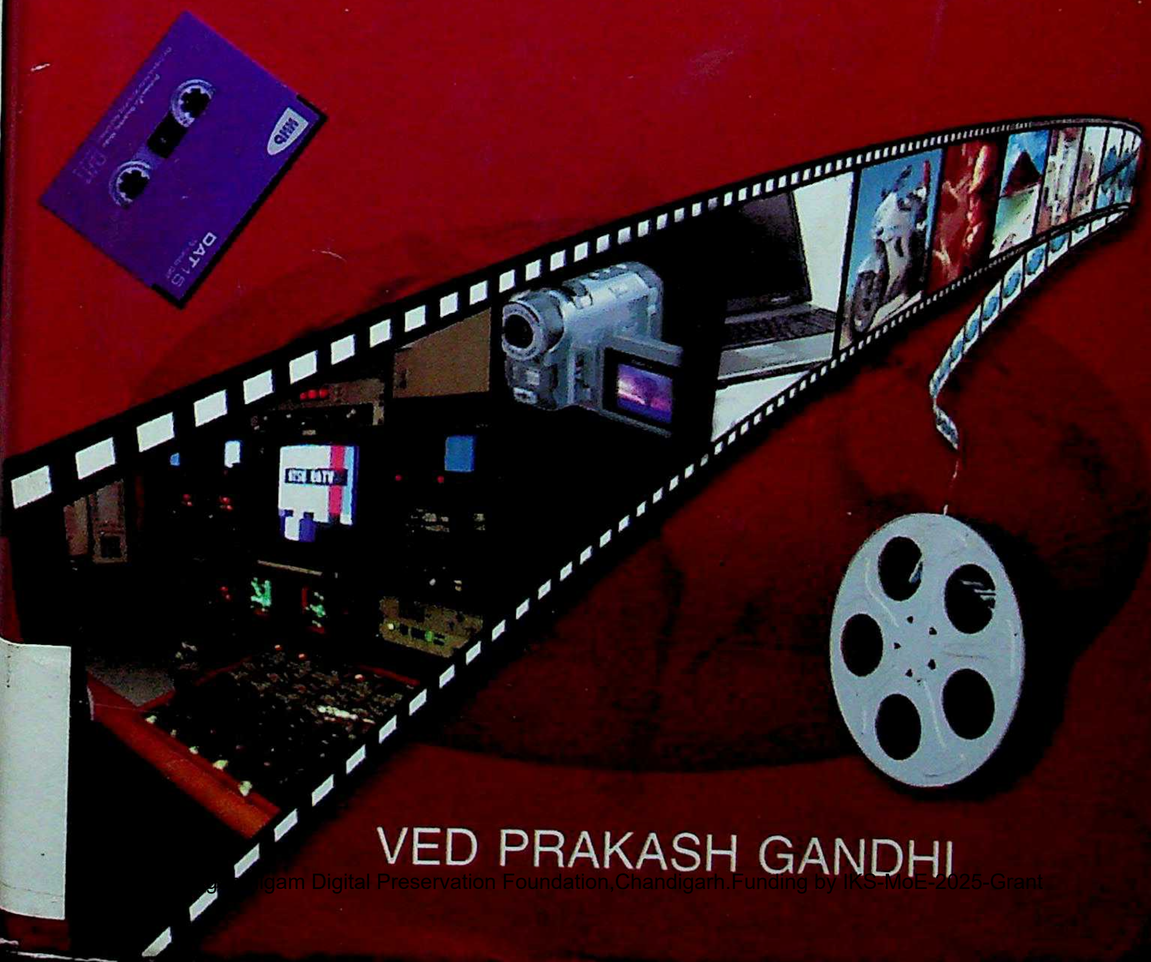
Electronic Media Communication and Management

Elements and Areas



VED PRAKASH GANDHI

This book provides an introductory overview of electronic media and the systems involved such as management information system and electronic mail message systems. After the introductory overview, focus shifts to radio, radio-news, radio-commentary and other associated features. An attempt has been made to create of comprehensive understanding of the inherent powers of news media in modern day society. A comparative analysis has been made as far as news-writing and news-editing are done for radio-news and television news. Also, the methodology followed for understanding script writing is discussed in detail, with special reference to television documentaries and commentaries.

The process of evolution of satellite television in India and its continuous growth and development has been discussed. Special focus lies on the respective roles of cameraman, editors and producers while undertaking the task of film making in its totality.

The book is user-friendly and tries to lead its readers into the issues which this field of study is correcting analysing.

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ELECTRONIC MEDIA COMMUNICATION AND MANAGEMENT

Electronic Media Communication and Management

ELEMENTS AND AREAS

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Preface

This book titled "Electronic Media Communication and Management: Elements and Areas" is of great use both at introductory level and practice level of mass media communication. The book provides an introductory overview of electronic media and the systems involved such as management information system and electronic mail message systems. Various uses and uses of these systems of electronic media is presented while training the path for so-called ideal flow. The interconnection between these systems and their vital roles in the whole process is described briefly. After this introductory overview, focus shifts to radio, radio-news, radio-commentary and other associated features. The whole process and path of advent of radio in India is traced. The contemporary relevance and usefulness of this medium of communication is traced. The benefits of modern day electronic communication via radio is highlighted in detail, in particular, that of radio-news and radio-commentary. The whole process of airing radio-news making its wide-spread availability is also discussed. An attempt has been made to create of comprehensive understanding of the inherent powers of news media in modern day society. In this respect, special attention is given to news-writing and news-editing in various modes of communication. A comparative analysis has been made as far as news-writing and news-editing are done for radio-news and television news. Also, the methodology followed for understanding script writing is discussed in detail, with special reference to television documentaries and commentaries.

Further, this book also talks in detail about the multiple applications of space technologies in satellite television, particularly for airing satellite news. Both national and global scenario are presented and the technological advancements in these areas are mentioned. The process of evolution of satellite television in India and its continuous growth and development has been discussed. The role of space technology in airing satellite news on television is presented in detail. Other areas and elements of mass media communication and management which finds its place in this book includes the field of film making. Special focus lies on the respective roles of cameraman, editors and producers while undertaking the task of film making in its totality.

In sum, this book deals with most of the elements and areas of electronic mass media communication and management. The book is user-friendly and tries to lead its readers into the issues which this field of study is correcting analysing.

Ved Prakash Gandhi

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1

Electronic Media Communication and Management: An Introductory Overview of Use and Misuse

ELECTRONIC MEDIA

To communicate with one another is a compulsive urge of human beings. Civilisations and cultures progress to the extent communications have made them possible. Speech (unaided for its propagation) has a limited distance range. Communication within the family and very closely living families helped the primitive communities. As movement also was limited, there could have been thousands of languages as despaired in the expression 'babel of tongues.' After speech, the next important development was writing. It helped preservation of ideas, of thoughts, of agreements and their transmission from generation to generation. Until paper and printing were invented, even writing could help only to a limited extent for communication between far flung communities and societies. Printing helped the multiplication of information and knowledge and their easy availability to tens of thousands of people. Even though paper and printing extended the range of communication, they could not influence the rapidly of transmission.

It was only from the middle of the last century that rapid transmission of communications by electrical means became possible. Telegraph helped the transmission of written messages, almost instantaneously, and telephony from 1876 onwards facilitated the transmission of speech, enabling the dissemination of information and knowledge very rapidly. Telegraphy and telephony are, however, means of communication from one individual to another, from any to any and could be said to be private means of communication. What is transmitted by telegraph or telephone could be known to millions only when it was printed and distributed through newspapers or otherwise.

The next quantum jump occurred with the invention of the radio and its utilisation for broadcasting of information from a central source to any and everywhere equipped with a radio-receiving device. This is communication from one to many.

By the beginning of the 1930s, almost all over the world radio broadcasting for information transmission over wide communities and areas had been established. From then onwards we could say that the information was becoming more and more electronic-based. In the 1950s began the transmission of picture along with voice for broadcasting. Television increasingly caught on. The black and white pictures were themselves a wonder, but television became an arresting marvel with colour transmissions. It has become increasingly affordable by more and more people because the transistors and the integrated circuits made the mass-produced radios as well as the television sets cheaper every decade. The invention and increased availability of portable recording and replaying devices enabled the capture of events as they were taking place and their near instantaneous broadcasting throughout the world. Communication satellites with the capability of telephony and telex and television helped the worldwide instantaneous transmission of news and views of events. Before the invention of the telegraph, it took weeks and months for news in one country to be known in other countries and continents. But with the radio and the television, both carried over satellites, distance and time have been so shrunk that information from one continent to another can be transmitted and known in as little time as it takes within a village. In other words, our globe itself has been reduced to a village.

Audio and video-cassette recording and their multiplication in million is enabling the spread of instruction and training and entertainment and education. One illustration of how an electronics involving education spreading system has come up could be useful. India is having the largest unlettered population, at over 500 million. The school going population is also of the order of hundreds of millions. It all of them are, in the traditional fashion to be sent to schools, the amount of expenditure over buildings, textbooks and transportational programmes can be recorded on video-cassettes and broadcast over countrywide or region wide media through the satellite, we can have very economically, and rapidly propagated education. What is called 'Projection Television' is a versatile aid. Pictures are reproduced on a very large screen attached to the television monitor, enabling scores of viewers to be instructed with the least expense. Also, instead of libraries of books if there is a library of video-cassettes containing text and illustrated and explained by the best teachers, and if these cassettes can be circulated among the schools, the quality of instruction in the village-level schools, which are poorly staffed can be fantastically improved.

Electronics, computers and tele-communication media are enabling the simultaneous printing of newspapers from several centres. Electronic book publishing is another rapidly growing activity. Personal computers, access data bases over telecom media and print out a mass of information in whatever format it is wanted. They are a great aid for information storage, retrieval and processing.

In modern times, because of the industrial revolution and intensive and economic exploitation of resources and increasing consumption of goods and services, huge companies or corporations and organisations are a necessity. They are also economically efficient. It is very necessary that all these companies and organisations explain to the masses of money providers and consumers why and how they are performing and how best their services could be utilised by the consumer. This is one of the most important aspects of public information and relations that every corporate organisation has to undertake. While newspapers could be useful only a fraction of the 30 per cent of the lettered people in India, mass communication media like radio and television are the most effective and economic means of mass information. Huge organisations become more and more impersonal and bureaucratised. Customers, and may be even the workers, will find themselves helpless in understanding or reacting with these organisations. Various communication media like audio and video-cassettes and electronic reproduction methods enable a public instructional and information programme to be carried out easily. They are the means by which mind can be informed and influenced for the achievement of an organisation's goals and for the transformation of society.

The Role of Videsh Sanchar Nigam

The Government of India formed the Videsh Sanchar Nigam which took over the OCS from 1/4/1986.

Development of Facilities

The first important stage was the establishment of the High Frequency (H.F.) Radio Station known as Beam Wireless Station in 1927. Dight, near Pune was the transmitting station; Dhond was the receiving station with control at Bombay. The first radio telegraph service was the UK. In 1933, first radio telephone service was established. Radiophoto made its appearance in 1943. During 1944, New Delhi H.F. station began operating.

Major developments after independence, was the establishment of regular H.F. radio stations at Calcutta (1955), New Delhi (1958) and Madras (1960). Additional services like telex leased services, meteorological services etc., began gradually.

The great leap forward commenced in 1970, with the establishment of the Vikram Earth Station in Arut near Pune. Seven years later, our second satellite earth-station began operation in Dehradun.

The wide-band submarine telephone cable system from Madras to Malaysia over the IOCOM (Indian Ocean Commonwealth). Cable system commenced operation, followed by the troposcatter system in Srinagar, linking India with USSR, in 1981.

The prestigious Gulf Cable System between India and UAE commenced its operation in.

The H.F. radio stations, except at New Delhi and Calcutta, were eventually closed down.

Modes of Operation

All international tele-communication services began in the manual mode of operation. With the establishment of (Penta Conta Type) Cross Bar Telex (Telephone Exchanges 1972/73) semi-automatic services became possible.

By 1977, fully computerised, Stored-Programme Controlled telex exchange (GATEX) was established facilitating automatic dialling. Similar gateway systems were established for telephony in 1982.

For telegraph traffic, meanwhile, fully automatic computerised Message Retransmission Systems (MRS) began by 1980.

Presently, the VSN operates through the four major gateways at Bombay, New Delhi, Madras and Calcutta. At Calcutta, we are shortly planning to have a satellite communication system. We have already fully computerised system for telephone/ telex/telegraph operating at Bombay, New Delhi and Madras.

International Facilities Offered by the VSN

Telephone: Fully automatic access to over 175 countries/territories/ destinations is available to an Indian telephone subscriber, on ISD basis. Other countries/territories are accessible on manual or semi-automatic mode. For full details of country code and charges please consult telephone directory.

Telex: Fully automatic access to 183 countries/territories/ destinations is available to an Indian telex subscriber on IXSD basis. Other Countries/territories are available on manual or semi-automatic mode. We have also provided store and forward (SFI) facility in telex service to select 24 countries, from the metropolitan cities Bombay, New Delhi and Madras. For full details of country code and charges please consult telex directory.

Telegraph: The MRS network facilitates automatic transmission and reception of telegrams to and from practically all parts of the globe.

Leased Services: Voice grade and telegraph type circuits can be leased by any Indian customer to anywhere in the world. Extensively used for Data purposes.

Private Message Switching System (PRIMES) is a leased facility available to an Indian customer having two or more international leased telegraph circuits, enabling him to contact national telex parties and foreign counterparts by leasing a 'port' in the system.

A 64 kilos per second (KBPS) INTELSAT Business Service (IBS) is operated by VSN on leased basis at Bangalore.

Television: Transmission and reception of International Television is carried out by VSN in coordination with Doordarshan.

Bureau Fax: This service enables an Indian party to send or receive documents or pictures—black and white to and from selected (27) foreign destinations; almost instantaneously.

Radio Photo: The press and the public can either send or receive radiophotos to and from Bombay (to be shortly made available at New Delhi) enables an Indian party to have simultaneous audio conference with upto 3 foreign parties.

Programme Transaction: This facilitates mostly Press correspondents to book calls to their headquarter abroad and on pass information either recorded or direct.

Multi-address Broadcast Service: This is used by the External Affairs Ministry to keep India's consular posts informed about India's position on various national and international issues.

Meteorological: This service provided by VSN provides data to the Meteorological Department for appropriate use.

Standard Time and Frequency (*ST and F*): ST and F service is used by the National Physical Laboratory.

Press News Cast: Initially, it was leased by PTI for news cast to Tokyo and Kathmandu. Now, it is used for transmission by PTI to Afghanistan, South East Africa and Burma.

Research Development and Training: The Company has a separate division at Pune for its Research and Development. A training institute provides post-entry and refresher training courses to all the engineering staff at operational level. The company plans to expand the scope of its training facilities so as to include various other connected disciplines.

International Circuits: There are about 1600 telephone circuits, 1200 telex circuits, 47 public, telegraph circuits 200 leased circuits (Voice, IBS and teleprinter type) and 65 Record Bearers in operation at present.

International Traffic (*May, 1988*): VSN handles daily over 1,50,000 international telephone calls, 60,000 telex calls and 12,000 international telegrams.

The Printed Word and the Electronic Invasion

It was the invention of the "movable type" cast in a mould, using an alloy of lead-tin-antimony, by Gutenberg, a German, in 1554, that created a revolution in the medium of mass communication and introduced the term 'printed word' which has become the most potent weapon in the fight against illiteracy and superstition and in spreading knowledge to every nook and corner of the entire world.

The traditional method of printing termed the letterpress, started by Gutenberg, using the metal type through the printed message, remained almost unaltered for over 500 years. Any changes that were introduced in the methods or techniques of composing were only in the mechanisation and automation of the typesetting process but not in the basic process of printing by the letterpress method. With the spread of books, journals and newspapers in the Western countries, after industrial revolution, which required faster typesetting and printing, mechanisation of the typesetting process became an absolute necessity. From hand composing, an entirely manual process of setting individual types, the transition was to mechanical composition, that is, setting types with the help of machines.

Several inventors came into this field of typesetting machines between 1820 and 1889 but many of them could not stand the test of time. Only two machines—Linotype (1886) and Monotype (1887) both American, survived the test for fully automatic text setting. With several improvements made constantly, they were serving the printers, particularly the newspaper printer, all over the world, setting types in all the languages in use. But with the invasion of the electronics on the communication media during the '50s' these hot metal typesetting machines have become completely outmoded and in the advanced countries they have been entirely displaced by computerised phototypesetting machines. This technological revolution in the form of phototypesetting has entered the Indian scene also very recently and will perhaps displace at least 60 per cent of the existing hot metal composing machines before the end of this decade. No one will think of buying hot metal machines any more, as the manufactures have stopped producing them.

Let us examine briefly the origin of this electronic revolution in the field of communication and its impact on the printed world. After the World War II, there has been enormous growth in the amount of recorded information, especially in science and technology, which is often referred to as 'information explosion.' This created a need for information storage and retrieval systems vastly different from the traditional method of the printed book which was too slow to keep pace with the information explosion.

One of the effects of this greatly expanded quantity of information is the development of specialisation. There is so much to know about so many things that nobody can encompass everything known about a major field. Therefore, one tries to segment the field, learn it in summary or outline form and concentrate on a sub field in detail, which is specialisation. As the information of every major field increases enormously and the areas of specialisation widen in greater proportion, the traditional method of storing the information in printed books becomes uneconomical, processing the information time consuming and location and retrieval of the stored information much laborious.

Thus arose the obvious need for a new way of processing the information at a fast pace, which will also permit subsequent location and retrieval as quickly as possible. This was how electronics came into the field of information processing. Though originally the systems were developed with scientific and technical communication specifically in mind, these were further developed to accommodate other kinds of scholarly and professional informational information transfer. It is new technology and a technological revolution, much of it electronic or related to electronics and computers. A whole range of new equipments, methods and techniques have been developed in the past few years for every segment of our system of communication through the printed word.

Though initially these changes were more technological than conceptual, the sweeping technological changes have already started encouraging new concepts and new modes of communication. Some of the new methods and techniques are listed below:

1. Electronic document creation and editing which includes word processing and computerised text editing.
2. Phototypesetting with a wide variety of direct entry, on line and off line computerised systems.
3. New imaging and reprographic techniques such as electronic printing, microform publication and laser electrographic printing.
4. Electronic communication including electronic mail, electronic publication and electronic journals.
5. New recording, storage and retrieval system like holographic storage, bubble memories and so on.

What is the impact of these electronic media on the printed word and what changes have they introduced in the traditional method of producing the printed product? The first of these has been to alter the nature of the basic product. In the traditional technology, the printed word was the one and only product. But with the introduction of the computer and the electronic media, the fundamental product was now a data base. It was no longer the printed word but a precise, manipulable, compact record which could be used with considerably flexibility for various applications, including that of the printed product.

The first impact is then the development of an electronic literature, a term used very loosely. The new technology makes possible ways of presenting information that were previously unthinkable—creating enormous user searchable bibliographic and numeric data bases stored in interactive computer systems as well as electronic message systems. Publication such as dictionaries, telephone directories, trade can now be revised, updated, subdivided and raised with a degree of flexibility never before known. Only the computers which drive the phototypesetters today make all this practical.

It is also now possible for the text or data bases created on a word processor or computer in one location to be transmitted electronically to a compatible device in another location simply through the conventional telephone lines. An author, for example, can sit at home, use his word processor to create a machine readable record in the form of a magnetic disc, transfer this text data to the printing press located far away through the telephone lines and the printing, using an interfere, can transfer this data to the phototypesetter which produces the author's copy in the form of a film negative or a photographic paper positive in the shape of final page proofs. By this means, the publishers and the type setting operator are both eliminated and the author directly produces the printed word and the printer carries out only the plate making and printing on the press.

Phototypesetters and the Printed Word

Though the entry of electronics has vastly changed the printing machinery, processes and techniques, in a general way, its greatest impact is in the area of typesetting only. In fact; phototypesetters have not only revolutionised the typesetting process but have changed the very structure of the printing industry as such.

With the introduction of phototypesetters of the first generation in the beginning of 50s, we have come to the fourth generation of phototypesetters in the beginning of the 80s. These are electronic marvels, very highly sophisticated and capable of things beyond the common man's comprehension. Many factors outside the printing industry have played a dominant role in bringing out these third and fourth generation photo setters. They include: computers, micro-computers, micro-processors, lasers, digitisation of information, screen-based technology including television and telecommunications.

What is a phototypesetter? To define in simple language, phototypesetters are machines which produce images on photographic film or paper as negative or positive in the design required for the printed page. They have suitable devices to store the characters, to select and expose them in the required size, form and measure on the film or paper.

The first generation machines (1946-50) were just the replica of the hot metal machines and the operation was mechanical.

The second generation machines hold negative film masters of characters on a disc or drum and use optical system, such as zoom lense or turret lens, to vary the type size. They were partly mechanical, partly electronic.

The third generation machines are wholly electronic and use Cathode Ray Tube (CRT) for the projection of characters. The characters are digitised and stored in magnetic discs. They can be electronically enlarged, reduced, slanted and emboldened. Digitisation also provides the potential of producing picture as well as text.

The fourth generation typesetter use lasers for imaging. Resolution is 1000 dots per inch and output speeds of about 1000 *newspaper lines per minute* can be achieved.

Today we have a proliferation of these phototypesetters that are manufactured with a system and modular approach, so that a buyer can install a simple system according to his present needs and expand it periodically to suit his growing needs. The direct entry photo setter is the simplest of these machines and an Indian firm has started manufacturing this in India in collaboration with the foreign manufacturer. Then we have the online systems, offline systems and page makeup systems.

The common feature of all phototypesetting machines is the input system to capture the author's words in the form of digital data, which can be manipulated and fed into the photosetter to produce the printed word. Key-boards are still the principal means of capturing the text, which are based on the 'Qwerty' standard typewriter layout, with a number of additional function and command keys besides the usual alphabet, punctuation marks and numerals. In the offline and online systems the key-boards, which are attached to a central computer directly or indirectly, are termed the front-end system.

Most of these systems were developed initially for use in newspapers, as they have been mainly responsible for taking the initiative in changing over to new technology. Today, the phototypesetters have become the mainstay of the general printers, too.

Future of the Printed Word

Will the printed word survive the analysis of electronic invasion? There are skeptic who believe that there is no future for the printed word, produced in the traditional way for over 500 years. They predict that there will be a world-wide paper shortage in the next century and printing of books will be extremely costly and electronic publishing of both books and newspapers will be very much cheaper. Though the actual events based on the experience of past may disprove this belief, it is still anyone's guess.

Some damage has already been done displacing the printed word in several areas. Here are some of these:

Microform publication of Micropublishing and Microlibraries are the dreams of the future which may completely displace the printed book. The dream is of a library housed in a catalogue cabinet. The "microfiche book" is a development that has come to stay and the computer output microfiche has enlarged its scope. As an indication of the space saving capacity of micro-publication, a library in UK contains some 58,000 pages of data on 800 microfiches, each 105 × 148 mm filled in a cabinet 7 in., by 6 in., by 10 in. The microfiche service could be more rapidly updated than the printed issues could ever be. Hence, where continuous updating of information is essential, such as in legal, professional practice and financial compilation microform publication has become an established competitively priced medium. Synoptic publishing and simultaneous publishing are two recent developments in periodical and learned journal publishing using microfiche.

Teaching and Learning without the Printed Word

With the phenomenal advancement already made in the micro-computers and further dramatic developments expected which will increase their capacity for information storage and retrieval at a much reduced cost, the micro-computer is potentially a teaching device and may become the teaching machine of the future. In educational settings it will be used for information retrieval, information giving, problem solving, manipulation of mathematical models, simulation of different experiments and so on. Using programmed learning techniques and with its capacity for interaction with the learner, the micro-computer could eliminate the paper based text or the traditional printed book, when all the students are enabled to have easy access to it.

For home-based education too, data transmission systems already developed and in use in the Western countries, like PRESTEL of the British Government Post Office, CEEFAX, ORACLE, BBC and ITV data systems would be used. When these are developed further as high power interactive systems, they will have many more possible implications for educational use. It is likely that correspondence courses of the future run by universities-institutes would switch to such a system at the expense of the printed textbooks. These systems would seem to virtually climate the need for the printed word since they can supply text, diagram and equations on the video terminal and also offer an interactive element with information storage and retrieval facilities.

Electronic Newspaper

The electronic newspaper is already a reality in the United States of America, which brings the electronic information to the very doorsteps of the subscriber. The *Columbia Dispatch* became the first newspaper in US to go electronic on 1st July 1980 by making almost fall of its editorial product available to the house and business computer subscribers. The subscriber has a television terminal in his house connected to the newspaper office through telephone lines. They call it 'Cable TV.' When the subscriber dials the newspaper office and turns on the Video terminal, the latest edition of the newspaper appears on the screen. Any particular portion of the newspaper like sports, entertainment, market reports, retail shopping, etc., can be called up on the screen by pressing the coded keys. That is the electronic newspaper which has eliminated the printed word.

Several other forms of interactive home electronic information system have been introduced in America and Europe by newspapers and press agencies in several cities for transmission of information of all sorts through the Cable TV system.

Electronic telephone directory was introduced in France on an experimental basis in 1981 to provide telephone directory information via video-terminals in lieu of the printed directories. Subscribers have access to all information in both the yellow and white page directories, more than one quarter million entries including advertising. If this and other experiments prove successful, all of France's 30 million subscribers will get free video-text terminals instead of printed telephone directories, by the early 1990s. One can understand how traditional printers will be greatly affected by the loss of such huge quantity print orders.

Paperless Book

A Paperless book has been published by a California publisher. The entire text of the *Computer Cookbook* is available in a disk, and customers can sign on to their own computer terminals for viewing the pages by paying a fee. A US school book publisher estimates that by the end of this decade about one-third of its sales will come from computer-related equipment.

Every computer or computerised equipment that is put on the market every day is more powerful than its predecessor and also much smaller in size and cheaper in price. Personal computers, word processors and video terminals may become household items during the 90s. Their capabilities will become hundred-fold. The impact of having a remote terminal in every office and house could be all pervasive. Printers will have to silently witness vast quantities of information bypass the traditional ink-on-paper process to go the route of instantly updatable, random access video point. In India, of course, it may take 50 years to reach this point.

Yet, printers need not lose heart. The need of printed books—like popular novels, biographies or travel books—for relaxed reading at home and during travel and perhaps even for reading in the bed before sleep, can never be replaced by the electronic terminal. With regard to our great scriptures, great sages have said that as long as life exists on earth, the *Ramayana* and *Mahabharata* will exist. As far as India is concerned, we can be confident that as long as the stories of the *Ramayana* and *Mahabharata* are read and narrated, so long will the printed word continue to exist and enlighten the human beings, leading them from darkness to light.

MEDIA

A wide range of electronic communication technology which can bring about a meaningful revolution and improvement in information transmission are new available. Many of the organisations in developing countries, may not be in a position to make use of all the latest innovations. The developing countries in collaboration with large business organisations should chalk out a phased programme for introduction of new communication devices into their organisational structure to make communication effective. Radio, television, audio-cassettes, video-cassettes, video-tape, video-discs, telidon, cyclops, video, videotex, etc., are the important innovations. The most significant new technologies are those based on the silicon chip, the laser, fibre optics and the set of technologies known as bio-technologies. It is necessary to introduce such latest and sophisticated communication technology in collaboration with other countries. The managements in developing countries must realise the .importance of new communication technologies for speedy, quick, correct and low cost transmission as well as for imparting education to catch up with the advanced countries of the world. The following paragraphs present at brief coverage of electronic media in wide use.

Both television and radio are electronic media. They have been discussed in detail under broadcast media part of this book, because they are major mass media. On the other hand, they form second group of advertising commercial media. In this chapter we present in some depth electronic media other than radio and television as well as film existing in communication field. Here we shall investigate the unique nature of electronic media in communication.

Geoff Potter points out satellite and its impact on distance education: "In some cases, hermes (The Satellite) brought people together in a way that was a every bit as emotionally moving as it was intellectually stimulating. In other cases students became bored, technical problems made effective interaction impossible, information seemed colourless and static."

Griffin points out some basic faults in 'mouth to mouth' communication. They refer to the problems of duration, speed, absence of visual clues, unidimension, absence of aphetic communication and disembodiment. According to Griffin, the role of the coordinator is very crucial and very difficult in a satellite programme.

Mass media assistance is required to communicate development programmes and achievements to the mass. Thus today seventy per cent of the population in the country is covered by television.

Visual Communication

A visual aid is any visible device that assists an instructor to transmit to a learner facts, skills, understanding, knowledge and appreciation. The visual method is actually an aid to use with other methods of instruction, rather than a method in itself. It is particularly useful with the dramatisation and lecture method. In the visual method, instruction is carried on through such devices as film strips, slides, movies, photographs, charts, posters, cartoons, models and actual objects. It is used as far as possible, as visual sense, is measured as effective as an avenue of learning. The visual sense can be increased to a great extent by visual aids. Quick and past presentation can be achieved which show a relationship among ideas, facts and can serve as a review device. The aids should be clear, simple, legible, interesting to have positive effect. It is practically possible to use visual media in combination of other media.

Facts, figures etc., can be presented in an early assimilable manner so that information can be spelled out exactly and the same helps to picturise the required matter. In corporate organisation the executives can substantiate the policies and the goals of the corporation with reference to data properly presented by the pictures. Like other electronic media, visual media also play a significant role in bringing up the communication gap.

Here one should remember the recently developed technology, namely, audio-visual. In this technique visual technology is the key factor as a tool to give effect to audio-visual communication. Visual device is an aid to audio and audio is just an aid to visual communication that implies opinions, expression, interpretation, explanation and narration of the pictures, photos, slides, etc.

Visual aids alone cannot make the communication adequate by itself. To be effective it must be supported by interpretation and narration by the transmitter. In communication visual aid helps observation. It is also an effective means of communication and developed techniques widely practised by the business and industrial houses, educational institutions, meetings, conferences etc. It can be used to communicate the communicator's thoughts and ideas through a visual medium.

Presentation of figures, statistical data can effectively be presented through visual aid. Visual aids represent a message by symbols. Using visual aids is combined with oral message with a view to clarify, explain to convince and even to attract the listeners' attention or interest. A number of factors are responsible to the receptive to visual aids.

Kinds of Visual Aid

1. *Overhead Projector*: Overhead projector is one of the most advanced and efficient visual aid. By tilting lens head up and, down and adjusting levelling legs, it is possible to produce uniform pictures. The machines has light equalising reflector, light intensifying condenser etc., which gives consistently bright and sharp picture.
2. *Charts, Graphs etc.*: A chart is a pictorial presentation in the form of a table or diagram of information about a particular subject. Chart depicts non-numerical relationship and a graph depicts quantitative relationship. Information maybe presented by charts, graphs etc. They are by far the most used visual aids. May be painted, printed or drawn.
3. *Flannel Board*: The ordinary meaning of the word implies a piece of material made of cotton or wool. A cotton cloth made in imitation of flannel. Flannel boards consist of a board covered with felt. Sticky backed visuals are placed on surface. It allows the speaker to put some action or movement and flexibility into an otherwise static presentation.
4. *Fascimile*: Facsimile is a mechanical media makes an exact copy. Facsimile transmits through telephone lines, exact copies of blue prints, layouts and other visual materials. It is increasingly used to transmit exact copies between distant places. So it is not used popularly to send copies between an organisation and communication medium or between the offices of agency and client.
5. *Magnetic Boards*: Magnets permit the use of heavier three dimensional visuals. Magnetic boards are similar like flannel boards. The only special feature with magnetic boards is that magnets permit the use of heavier three dimensional visuals.

6. *Electro-writers*: Writing caused by electricity. Electro writers are generally used by the executives or demonstrators. They can write their black board notes through a long distance through a transmitter unit hooked up by telephone lines with projector unit and screen.
7. *Tele-lectures*: Telelecture as a visual aid has been discussed elsewhere in detail. It is a common tool for making an audio/visual presentation at a distance. A best technique for making audio/visual presentation at distance. With the arrangement of telephone department there is hook up from a speakers office to a meeting place or class room or conference where visuals can be shown while speaker is heard.
8. *Audio- and Video-Cassettes etc.*: A number of electronic media have emerged in the field of communication. They are highly sophisticated communication technologies produced by devices made according to the principles of electronics. There are a number of electronic media available and is gaining importance all over the world. They are likely to revolutionise communication system. To mention they are video-cassettes, audio-cassettes, video-disc, telidon, video-tape, videotex, disc recording etc. They are useful in overcoming some of the difficulties associated with conventional media.

Kinds of Visual Aids—Factors in their Selection

There are many kinds of visual aids. They include such devices as tables, charts, graphs, photographs, maps, diagrams, pictorial presentation, visual projection, cine, the slide, overhead projectors etc. All kinds may not be useful for all kinds of messages. It is the responsibility of the efficient communicator to exercise his skill in the selection of appropriate visual aids. As a matter of fact choice of suitable visual material depends on several factors such as:

1. The need and requirements of the organisation.
2. The nature of subject matter to be transmitted.
3. The group of people or listeners to whom the subject matter of message is intended to put across.
4. The selection of appropriate aid among various kinds of visual materials available to meet the purpose.

5. The object of transmitting a particular piece of message.
6. The attitude and the capabilities of the listeners to observe visual aid and understand the message.
7. The nature of the message to be presented in the aid.
8. The availability of adequate expert people to prepare aids.
9. The time, cost and labour factors also to be considered.
10. Any special purpose for which visual method is to be adopted.
11. The knowledge of the transmitter as to how it is to be operated.

There are various types of charts such as lines, bars, mathematical graphs, pictograms, cartograms, diagrams, area graphs, bargraphs, grouped bar, subdivided bar, range bar, step bar, twin bar, gantt chart, paired bar, deviation bar, sliding bar, column bar, histogram, curve graph, slice graph, matrics graph, multi-scale graph, cumulative graph, cumulative frequency graph or ogive index graph, z chart, frequency polygon, semi-log graph, log graph, band graph, etc.

Guidelines for Using Visual Aids

1. The media should enrich or increase the listener's, viewer's knowledge as a basis for decision-making.
2. They must show the most important and significant matters referred in the oral discussion part.
3. To prepare charts, diagrams or transparent paper typed before beginning speech.
4. Pictures, slides etc., should be attractive and interesting.
5. They should clearly and precisely clarify or explain a point or to convince and at the same time to attract the attention or interest of the observer at a glance.
6. Keep the aids in the order and sequence in which oral part of the text follows.
7. Each aid should bear a caption or label clearly and lucidly.
8. The observer capable of being to grasp the pictorial message quickly and correctly.
9. The captions or titles or labels should be as far as possible in capital letters or written in bold letters. This will help not only the people who are farthest away but also can be read and understood at a glance.
10. Avoid all distraction activities in the place of display.

11. Display visual aids with sufficient light or in a dark room depending upon the type of aid used.
12. Select appropriate time and context of text discussion to show aids.
13. Wherever necessary footnote explanation, should be given at the end of or at the bottom of picture or chart.
14. Visual aids should be simple and good enough to depict the message to help the observer to comprehend quickly.
15. It is desirable to use different colours to draw attention to a particular aid.
16. Accuracy of message incorporated in the aids and which need to be matched with the spoken words is almost important for smooth transition and discussion.

The Pros and Cons of Visual Aids

The visual media are more extremely useful. The advantages of visual media are as follows:

1. *Quick Communication*: Visual aids are known for quicker communication. Speedy communication is necessary in respect of certain subject matters. Where certain important facts or figures need to be high lighted or attractive observation is necessary, the visual aids are more useful.
2. *Understanding at a Glance*: Visual techniques like pictures, slides etc., enable the observer to concentrate on them to understand at a glance. This merit is not available in respect of other oral and written communication.
3. *Memorising Effect*: Message in a pictorial form may long last in the mind. The observers can carry home on a permanent way and recall and refresh the image whenever he wants. It has more memorising effect. A well designed aid can project a distinctive image of the situation and hence more memorable.
4. *Comparison*: Charts and graphs depicting data for various years so that they facilitate easy comparison of data by observing trend line having characters of constant or up and down movement. The figurative relationship can be presented pictorially.
5. *Bird's Eye View*: Charts, graphs, slides and other visual aids give a bird's eye view of a given text of subject matter shown at appropriate time and spot. The information

presented on them is easily understood, simple, readily comprehensible and intelligible.

6. *Dynamic*: Information transmission is a continuous process, routine on different matters. So the subject matter of communication may continuously be changing based on activities, work and correspondence. Visual aids can be prepared accordingly to changing needs. Therefore, visual aids are not static but dynamic. They carry greater force through its ability to demonstrate current message.
7. *More Revealing and Appealing*: Visual aids are more revealing and appealing to the eyes. Figures are dry hard to eyes but visuals are more attractive to the eyes fascinating and impressive. Numerical data may not leave a much lasting impression on the minds. Even a layman can understand the nature of pictures.
8. *Stimulating*: They can often generate interest by providing a contrast to the written or spoken text of the subject matter.
9. *Saving Time*: Visual aids save lot of time as very little effort is sufficient to grasp, understand to draw meaningful inferences. The psychology of the human mind is that an individual may not like to go through or hard written words.
10. *Audience Participation*: The participatory approach in communication can be achieved through visual media. It involves audience participation to have effective interaction. The term participatory communication refers to the efforts along several lines to develop communication involving recipients of message. In this audience also affect the communicator. The audience or a part of audience play an effective role in communication.

Disadvantages

The visual aids also have their limitations and disadvantages which are as follows:

1. *Message Limitation*: At a time one picture, slide, chart, graph etc., can be shown. Only limited subject matter can be accommodated in each medium and only transmit a limited number of communication pieces. A congested presentation or heavy message load may result in the risk of confusion.
2. *Preparation*: Preparation of visual pictures takes a lot of time. It requires technical and expert people to draw, print or paint.

3. *Cost*: The main limitation of the media is that it is costly matter to use. This is the reason for not using visual aids in majority of the cases. It involves not only heavy installation cost but also recurring revenue cost. The real criterion for not using by majority is the cost.
4. *Time*: The media, though simple and attractive to see is not so easy in practice because it takes lot of time, effort in their preparation. The preparation of subject matter of discussion or text or oral report is invariably be quicker to produce than visual aids. It requires lead time to prepare.
5. *Approximation*: Approximations and adjustments, round of figures are the common features in preparation of charts or graphs. Pinpoint accuracy in the presentation of message is not possible in all circumstances. It gives some sort of confusion and communication gap.
6. *Personal Preference*: Certain people dislike or are suspicious of graphs, either because they have been conditioned to believe that high technical skill is necessary to their understanding, or because they consider that printed numbers automatically invest them with a degree of authority that is lost immediately they are displayed in graphical form.

Audio-Visual

The word means sound or hearing. Visual means sight or the process of seeing. A new sophisticated mass communication technology capable or producing sounds and pictures. It is possible to visualise from it or to form a clear picture of something in the mind. Television, pictures, films etc., that are used as aids to learning. Audio-visual aids are used mostly in teaching, conferences. Recent development in audio-visual devices are revolutionising communication systems. Many audio-visual devices have come up for use and new modes of access to information are emerging. These devices have relevance for the distance communication, their potential has yet to be fully recognised and exploited particularly by all large-scale business organisations. The recent devices are the video and the audio-synchronised slide projector units, which screen programmes, often referred to as audio-visuals.

Audio-visual aid is an effective means of communication. A newly developed highly sophisticated communication technology widely practiced in recent years by the large and complex business organisation, educational institutions and government departments. Audio means sound or hearing, as mentioned above is just only an aid to visual communication. It helps to bridge the communication gap. Audio-visual technique is a tool to give-effect and impression to effective communication. Audio in relation to visual implies interpretation, explanation, and narration of the pictures, photo, slides, film etc., shown and used as a means of communication having both the qualities of seeing and hearing.

Visual communication is not complete unless it is supplemented by comments, narration, explanation, interpretation to be given by the transmitter or the communicator at appropriate stage where slide is shown. Audio-visual aids combine both the advantages and meet complete and effective communication. Just seeing the visual aids does not satisfy the much needed explanation required by the observer on the visual aids. While observing, a piece of explanation is expected by the observer to form full opinion and understanding. Therefore, audio-visual aids have been widely used in recent years. In precise manner, it may be mentioned that business houses have in recent years do much rely upon audio-visual aids to bridge the communication gap and as a means to effective communication. They are really and greatly helpful to the enterprises in achieving its desired goals. This media brings people together and closer and to get people well informed with the objectives, and plans of the organisation.

Uses and Merits

Indeed, the management is adopting this aid within the organisation:

1. To inform and help people working in production sections knowing the different sophisticated techniques, produces and methods or production.
2. The industrial and business houses do much depend upon this technique to apprise people working at the front line about the discharge of organisation's goals and social responsibilities.
3. To inform people within the organisation about the people working in other organisations for comparison.
4. The government can inform the public about national objectives, plan progress, achievements, development schemes etc.

5. Educational Institutions can use them as an effective medium to impart instructions.
6. Managerial functions like planning, control, direction and motivation can be effectively discharged.
7. Help to arrive at a correct decision and formulate a policy.
8. Extensively can be used for broadcasting adult educational programmes, to impart education especially at elementary level, and to have a clear communication with the villagers.
9. Both commercial and non-commercial mass publicity, mass propaganda, education, opinion and research can be taken up.
10. To educate people in general about any specific development in any particular area.
11. To get the people informed about the message of the communication.
12. To depict a clear idea with possible narration, explanation, interpretation, comment etc., which makes it easily understandable.

The success of organisational efforts in group activities very much depends upon the choice of tools and techniques and their application thereof for the solution of its problems. Urban areas have a fairly well developed system of mass-media. It is, therefore, necessary to device a clear communication method to reach villages. The villages are unlettered, various other audio-visual media like simple and striking posters with appropriate illustrations and slogans, mobile vans fitted with public address system, will constitute one form of media.

In communication planning today, a move towards a scientific system is simultaneous with proposal to induct the new media into information programme. The media provide a technological tool for substituting for, or extending the reach of the traditional communication system. The aids provide an opportunity and the occasion for the induction of instruction, direction, coordination and motivation reform.

The language of the programmes telecast over media is important consideration. We have 14 recognised languages and there are many unrecognised languages and dialects. Local or regional languages should be given priority. From Indian context a number of factors affect language selection such as time-sharing of the satellite arranging for suitable translations and transcreations of programmes, and ensuring a minimum qualitative standard and so on.

It is more appropriate to emphasise in this regard that in order to achieve the desired objectives of effective communication and to deliver the goods properly, the language selected should be lucid, clear, precise, easily understandable and in tune with the popular use. The visual media like pictures, slides, films should be attractive, of educational value, capable of creating impression, long memorising element, straight approach, to convey the message of ideas, facts, opinions etc., and to arrange them orderly without technical jargons. The timing factor of programme telecast is also equally to be emphasised. Otherwise the message may not reach to the target. Therefore, timing should be convenient for the people to whom the broadcast is meant for, programmes should be properly arranged, and they should not be too long or too short.

In order to make the audio-visual media more effective and useful, it should be necessary to:

1. have sufficient autonomy in developing and broadcasting programme;
2. provide special channels and frequencies for villages, and for educational programmes;
3. have professionals and talented people to produce good programmes; and
4. constitute expert group which can monitor and evaluate the programmes to bring improvement.

Video

A modern technology can greatly enrich oral message relating to Television and Radio. A word applied to all visual aspects of television signals, equipment etc. In common usage, for video recording or for any machine that can be used to record and playback such recordings, such as video-cassettes, recorders, video-tape recorders etc. Prior to 1966 a good quality black and white video recorder and player cost anywhere between 50,000 and 1,00,000 U.S. dollars. A massive break through in this technology has taken place in the mid 1960s and by 1970s good VCRs were available for about 1,00 U.S. dollars. In India today it is possible to acquire a colour monitor and VCR for about twenty thousand rupees and the prices may go down further in the years to come. VCRs have already made mass use in the entertainment field and also made a modest beginning in the educational field. Video-based instruction is already in sue in advanced countries.

The experience and facilities in the United States are of some interest. As of 1980, video-taped lectures for 450 courses prepared by a faculty drawn from 22 universities were available to the interested users. A National Technological University has been established and it offers on-campus as well as off-campus instructional television courses through video programming, which enable students to work towards a master's degree programme. Video-cassettes are available for programmes produced in the studio as well as those produced through recording of candid classroom instruction sessions.

A remarkable development in India has been the production facilities for preparation of video instructional packages as set up in some universities. There are many advantages in video use for communication. Among its advantages which one may mention is the richness of the media in conveying instructional material using visual images, colour, sound and special effects. A major drawback noted is a terms of the lack of interaction between the teacher and the student. Except for special situations, if one treats video-based instruction, not as a substitute for a existing arrangement of live-instruction, but as an aid, there is little dispute regarding its utility. For many special situations, video-based instruction can also successfully serve as a substitute for live-instruction. It is high time, therefore, that engineering education in India begins to explore the potential of this new technology for making instruction more effective and widely accessible.

Video programmes are more expensive than slide programmes. Video programmes are simpler to play back as one does not have to undertake the laborious process of mounting slides. Other advantages are duplication is cheaper and of two types, namely, studio production and the candid classroom production which is an impromptu presentation. In case of studio production complete script is to be prepared prior to recording.

A number of video programmes have been produced in India in educational information field. It has been under the aegis of the Curriculum Development Cell of Civil Engineering Department at IIT Delhi, using production facilities at IIT and the Mass

Communication Research Centre of Jamia Millia. The video programmes are:

Alter Berg's Limits, consolidated undrained Traixial Test with pore water pressure Measurement; Dewatering of Sub-soil using well point system, construction of under-Reamed Pile Foundations.

Audio-Cassette

One of the advanced technology in information technology which is presently available in the market and is in popular use and gaining importance throughout the world. Among others, the materials used for audio and television can be supplied in the form of audio-cassettes. Audio-cassettes can be stored. It has been found to be very useful as a tool of self-learning, as a means for executive training, and as an aid for continuing education. Audio means sound or hearing. Audio-cassette is also used in recent years as the most useful teaching medium. These enable the learner to have control over the learning materials. The learner can listen to the cassettes according to his own convenience. It can be stopped at any time. Another advantage of audio-cassette over radio is re-use over a section of the tape whenever he wants and it can be used again and again for revision or recall. Photograph records and flexidiscs are further developments in this matter.

An obvious advantage of the audio-cassettes over the radio programmes is that they are under the control of the user. Students can stop the player to take rest, make notes or can replay a difficult section. One more use of the cassettes, in the words of a student, is: "I find the tapes very useful, particularly the discussion ones. It is definitely a 'contact' with the staff even though it is remove."

A study of the Distance Teaching at Thailand's Sukhothai Thammathirat Open University (STOU) gives us an idea of the different purposes the audio-cassette can be used for. STOU used the tapes to,

provide orientation of the course,
clarify certain complex ideas,
give' feedback to the student's activities and assignments,
summarise major ideas of each unit, and
present the views of external experts.

Massey University (New Zealand) tried using cassette tapes for tutorials in History. Groups of learners listened to a lecture on the tape. Then they would discuss the given questions and record the conclusion on the tape. They sent this tape to the university which sent its comments either again on tape or through mail. Gwynn has analysed the results and they would be applicable to all the subjects where 'tutorial' forms an essential part and where no single answer is possible for a given question.

Video-tape

A recording tape carrying pictures and sound. It is used to record programmes in pictures and sound using video-tape. Video-tape is a powerful alternative to conventional printing. Video-tapes have literally taken over the entertainment world from Indian Cinema. Video-tape store magnetic signals for simultaneous subsequent retrieval of the visual and the audial information components. Lectures by experts, demonstration of process/techniques and field trips of inaccessible/remote regions could be recorded on video-tapes for subsequent use. TV series like 'Secrets of the Sea' and 'The Living Planet' illustrate the numerous possibilities of its use in OLS as well as FLS. Video-discs have not been as popular as video-tape in spite of their obvious advantage. Compared to video-tape, video-disc...represents the densest storage medium in existence. It is very durable and because of the nature of the system, free from wear...its radial format provides almost instant access to anyone of 55,000 clear, sharp and rock-steady images, instead of having to wind foot after foot of video-tape. Compared to video-tape, video-disc recording is less cumbersome and though its front-end cost is much higher, it is almost thrice as cheap as video-tape in the long run.

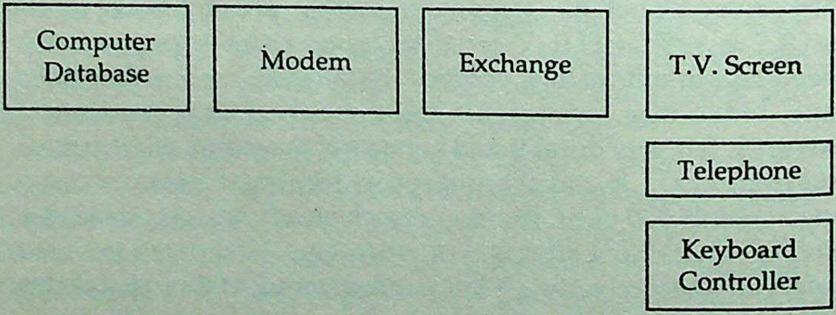
Video-tape is a very useful innovation which removes the constraint of viewing TV programmes at a fixed time.

Video-tex

The international name for the system originally designated *viewdata*, but also often taken to mean the broadcast service, generally known as Teletext. Sometimes, the term "broadcast videotex" is used for Teletext. The remarkable development in the electronic media, among others is videotex. This technology increases the capacity of the television set. It allows the home television set to function like a computer terminal and retrieve information and graphics from a remote data base. A videotex system would be very useful in disseminating general information about courses and programmes available through distance education.

Word processors and text processors have made text-editing much less cumbersome and they now provide easy availability of simpler versions of text to suit the competence of individual learners. Electronic publishing could be videotex-based. Videotex system comprises a telephone, a television set for monitoring, a computer fed data base, a key board controller and a modern unit 'Modern' is an acronym for a modulating demodulating device because it converts a digital square-wave signal that cannot be processed by a telephone into an analogue signal that can be easily processed by it. It also provides for reverse function, *i.e.*, conversion from the analogue into the digital form. The following figure represents a schematic diagram of a videotex system.

Components of a Cablecast Videostex System



The listener/viewer operates the key controller and the oral information is available through modem over telephone and its visual counterpart is flashed on the T.V. screen. The telephone and modem allow for a two-way interactive system wherein the listener/viewer can ask questions, seek clarifications or get supplementary information. Prestel (Great Britain), Antiope (France), Captain (Japan) and Telidon (Canada) are good examples of successful videotex systems. Among these, prestal was the first to become a world videotex service in 1979. Teletext, on the other hand, provides for one-way facility. The listener/viewer cannot seek additional information. Videotex is relatively faster and provides easier access to and more fruitful use of computer database. Videotex thus holds greater promise for Indian Open Learning System.

Information can be stored in large quantities in databases. The Council for Educational Technology of Great Britain provides a good example of a fast developing educational database. Large databases stored on mainframe computers with multiple access points can put learners in contract with an almost inexhaustible store-house of information. The American Centre at New Delhi through its instant access to various databanks in the U.S. now makes available the latest information on almost any topic to any scholar who is sure of the nature of information on almost any topic to any scholar who is sure of the nature of information that he seeks. Data vendors like DIALOG, MEDILINE, MUXUS can be hooked on to the telecommunication network in the U.S.A. and made available to information seekers almost all over the globe.

Therefore videotex is a transmission device system. It uses a T.V. set to display text. It helps to use the computer based information services. Teletext and viewdata are the two kinds of video systems.

1. *Teletext*

Teletext refers to the transmission of text on the usual television channels. The system displays text on T.V. sets. The British Broadcasting Corporation (BBC) and Independent Television (ITV) render pages of information when requested by the viewer. Teletext system is more popular in British region. On switching key pad and within a few seconds the required page appears on the screen. The system covers many specific topics like stock market, consumer prices, financial matters, weather information, economics, technology etc.

2. *Viewdata*

Viewdata is another type of videotex system. It is also computer based information system. The network operates by linking, viewdata terminals to a central computer through telephone lines like in case of teletext on request by the viewer page appears on the screen or printer. Originally information is transmitted on pages.

Video-Cassettes

The technology is available and is gaining importance all over the world. The material used for radio and television can be supplied in the form of video-cassettes. The video-cassettes can be stored. In view of limitations of television increasing use is being made of video-cassettes.

Video-Disc

Video-disc is a new development in the electronic media. It increases the capacity of the television set. Video-disc is a system similar to the long playing record except that it carries both audio and video through the conventional television set. It has enormous storage capacity. The glossary of technical terms related to new technologies gives meaning of video-disc as a system for recording video information on a disk, similar to a long-playing record, which enables in to be replayed. However such a system can also be used to record digital data and such discs can hold very larger amount of information, although the data can only be written once and, in order to amend data, it has to be rewritten on a blank part of the disc.

The optical disc has more enormous storage capacity. The optical disc can store, 1,08,000 tracks and 54,000 on each side. The entire Encyclopedia Britannica could be stored on a single disc with a room to spare. Usually called as disc communication video-discs are other powerful alternatives to conventional printing?

Disk

Refers to computer. A revolving device platter on which data and programmes are stored. A file, *i.e.*, an organised collection of connected records, that resides on a magnetic disk. Disk drives is an electromechanical device that rotates magnetic disks, that writes data and reads data from a floppy disk. Disk pack ais a storage medium having multiple magnetic disks. Magnetic disks are popularly used device for direct access secondary storage. It is a metal or plastic platter like phonograph record. There are several types of magnetic disks. But all magnetic disks are round platters coated with a iron-oxide or other magnetizable recording materials. Disks are of different sizes. Such as larger 14 inches metal disk, same size metal disks packaged in removable cartridge or disk pack, small 8 inches and $^1/_4$ inches rigid disk housed in Winchester disk devices and same size portable floppy (flexible) disks, 4 inches compact floppy and rigid disks. On a magnetic disks there are no grooves, and data and information are stored on disks in a number of invisible concentric circles called Tracks. A drive which rotates a disk at a constant speed of between 3000 and 600 revolutions per minutes. Hard disks rotate at a speed from 2400 to 4700 revolutions per minute.

Floppy Disk

A computer device used to store data and programmes. Also called as diskette. A low cost thin flexible disk coated with magnetic particles. A magnetic medium used for storage purpose. Standard disks are eight inches in diameter and the more common mini disks are about 5″ inches. A mini disk has a storage capacity around 15 to 20 pages of a book, its special quality is that it is flexible, flat, that magnetically records and provides access to stored data. Contrast with floppy disk is hard disk which is a rigid metal platter coated with magnetic particles. Optimal disk is a device used with laser reading or writing to store huge quantities of data. The source document data to be keyed directly into a floppy magnetic disk. It is called floppy disk because it is made out of flexible plastic material. The plastic material is coated with iron-oxide recording substance and data are recorded as tiny invisible magnetic spots on this coating.

As a storage medium, floppy disk is used in word processing.

Magnetic Tape

A magnetic storage device, utilises magnetic properties of materials to store data on such device. Such devices are disks tapes and chips. A magnetic tape is a tape or ribbon coated with a magnetic material on which data and information may be stored in the form of magnetically polarised spots. It has been used for decades as an input or storage medium, for batch processing. Today also it is used for high speed large volume batch application. Its advantages are high data density and fast transfer rate. The magnetic tape input medium is packaged in different ways. On a plastic ribbon iron-oxide or other magnetizable materials are coated. Tape in large reels is used in mini and mainframe computer systems. Magnetic tape cartridges are used in minicomputers. Magnetic tape cassettes are also used in minicomputers. Tape is similar to one used in a sound tape recorder. It is a plastic ribbon coated on one side with iron-oxide or some other material. Both information, data and sound can be played back many times similar to the songs on a sound tape, the data and information records organised on a magnetic tape can be retrieved. Read or write heads are small electromagnets capable of reading, writing, or erase the polarised spots that represent data on magnetic tape.

Telidon

The Canadian Videotex service. It differences in a number of respects from the UK prestal Service, particularly in that the data is transmitted in the from of "picture description instructions" rather than as a serial character stream. As those PDIs occupy more than one by teeach it may be a less efficient method of transmitting data. But this is in fact, dependent on the data being transmitted. The graphics displayed are of a higher resolution than those possible in alpha-massaic system such as prestel. A Canadian video system. Technologically advanced countries have developed useful combination of cable T.V., electronic black board, fibre optics and telephone that converts a simple television set into a powerful and educational tool called the Telidon.

Cyclops

A British electronic system. Cyclops is a system devised to overcome the lack of visual support. This allows tutors and students to sue a light open to write or draw on an ordinary TV screen. The picture is converted digitally to a second signal and sent down a standard telephone line, where it is decoded and appears on the TV screen at the other end of the line. Prepared visual material (stored on audio-cassettes) can also been sent down this line. It is an audio-visual teaching medium. The British Open University has developed an extremely versatile audio-visual teaching medium called Cyclops which is based on the conventional TV set, standard audio-cassettes and microcomputer technology. The Cyclops can also be linked to a telephone and that increases its versatility as a teaching tool.

COMPUTER

A large mechanical and electronic contrivance with associated electro chemical equipments capable of carrying out mathematical functions at high speed and accuracy. Computer is capable of storing and processing huge quantity of information and performing calculations through data processing machine.

Computer has been defined by the United States of American Institute, as a device capable of solving problems, by accepting data performing described operations on the data and supplying the results of the operations. Calculators, digital computers and analog computers are the types of computers. It has components like input unit, memory storage, arithmetic unit, output unit etc. Computing processing is done and controlled by a computer programming. It has separate language like Cobol, Fortran etc.

An electronic contrivance which solves problems and does complicated calculations by processing data according to prescribed, programmed instructions and then produces and or retains the outcome of these processes; one who computers; a reckoner; a calculator (New Webster's Dictionary).

According to M.K. Adlier Computer is a machine for carrying out calculations of several stages automatically. May be Analogue Computer, which simulates, processes and produces results measured in physical quantities, or Digital Computer which carries out mathematical processes out by operations based on counting.

Computer is used for not only mathematical purposes, but has emerging role of communication, and in education particularly more in engineering education. It is an excellent device that can be fully employed. V.K. Sabharwal has greatly emphasised computers and its role in education. His observations are as follows:

Computers are going to be the "Whizz-kids" of our future educational system. Computation, information storage, communication and control are the four major functions of most computers. Super computers are endowed with artificial intelligence and they are capable of intermediate level reasoning as well. Intricate calculations or multivariate data analysis become almost 'kid-stuff' with their help. Huge amounts of information can be very systematically stored in its memory (depending upon its memory size) for subsequent retrieval and use. Computers can provide flexible interaction with learners within the limits of the programme that defines their functional range. Computers can help us exercise extra fine control over various processes like satellite maneuvering, satellite tracking and rocket launching. A computer memory may be of ROM (read only memory) or RAM (random access memory) variety. The ROM variety is more widely used and its four sub types, viz., mask programmed ROMs used for storing programmes during its manufacture, PROMs (Programmable only once at manufacture stage), EPROMs (erasable programmable read only memories that can be programmed many times) and EAROMs (electrically alterable read only memories) have been described in detail by Hankridge and Bradbeer *et al.*

Use of computers in education has resulted in CAL/CAI (Computer Assisted Learning/Instruction). Arrival of computers in American classrooms has been compared to an avalanche. A variety of computer languages both low level and high level (algebraic) enables users to work with various computers, *e.g.*, ADA, APL, BASIC, COBOL, FORTRAN, LISP, PASCAL, PL/I, RPG-II, SNOBOL, SPITBOL, WATFOR, WATFIV, LOGO, etc. Computers can be immensely useful in providing individualised repetitive or analogous practice to learners, problem-solving exercises as well as activities for developing a variety of skills in a training programme. Project Class should prove a catalyst for increasing the use of computers in Indian education.

B. Singh in his key note paper presented at International Conference on New Technologies in Higher Education, New Delhi (1985), explained the use of computer in academic communication. He remarked that: The computer is an excellent device that can be usefully employed for evaluating student's assignments. A fully developed computer Assisted Education System can be used for correction and comments on student's replies to multiple choice questions with carefully selected distractions. In this system, an optical reader 'corrects' the students' replies, after which the computer selects relevant comments and explanations from among a great number of those programmed and stored for the purpose. The computer also checks and refers to the individual student's answer or an unsatisfactory answer elicits different comments from the computer, depending on the way in which the student has misunderstood or wrongly combined items. Sometimes even correct replies are commented upon to underline something important or to strengthen the motivation of the students. Encouraging and counselling comments based on the overall performance of the student are also provided by the computer. All this is typed by the computer into a personal letter addressed to the individual student. However, this use of the computer is restricted to the objective assignments of the multiple choice type. Therefore, a number of subjects, themes within subjects and general types of learning like free problem oriented learning would require live tutors. Even the multiple choice, questions which can be marked by the computer are not always suited for all kinds of learning outcomes. The greatest advantage of tutor marked assignments is that it greatly reduces the average turn-round time of the assignments. The computer also eliminates the chances of erratic marking which has become the ban of our examination system. The computer ensures uniformity in evaluation.

Computer Aided Design, Instruction and Learning

The role of computers in engineering education cannot be over emphasised and needs no special elucidation. The computer assisted instruction involves the use of computers to perform instructional functions. In order to update the syllabus and improve the standards and to prepare the students to tackle the problems of the future, the curriculum must encompass latest technological advancement relating to Robotics, Computer Aided Design (CAD) and Computer Aided Manufacturing (CAM). Computer based instructions include a broad range of application. But they can be divided into two types namely: (1) Direct Instructions (2) Instructional Management. The first type is called as Computer Assisted or aided Instruction, and the second type is called as Computer Managed Instruction. Some of the features of these two systems are:

I. *Computer Assisted/Aided Instruction:* It covers a number of activities such as drill and practice, tutoring, simulations, gaming, enquiry, dialogue, information retrieval and problem solving. It is relating to educational concept which emphasises the student in conversational form with a computer which has programme formulated in advance. It perform any instructional function presenting materials, problem situations, guiding a student's thinking by answering his questions, assessing his performance, managing his path through a course of selecting the material to be presented or by assigning tasks to be performed away from the computer, or any combination of these. Alternatives through instructional units are programmed into the computer. Besides machine directed activities as mentioned above it includes machine student dialogue, counselling, guidance. In sum it is the use of computers on time shared basis to carry out many instructional management function.

II. *Computer Managed Instruction:* It includes instructional support functions such as testing prescribing, record keeping, scheduling, monitoring and time and resource management. The machine discharges, the functions to monitor the instructional process. The object in its use is to provide diagnostic and prescriptive information to the instructor to guide him in making instructional decisions. It takes advantage of conventional data processing equipment.

Computer Aided (Assisted) Assessment, Examination, Test (CAE/CAT), Computer Aided Design (CAD), Computer Aided Learning (CAL) and Computer Managed Learning (CML) or some of the new developments in education communication. In the days to come emerging role of computers in engineering education would be very great.

Types of Computers

Based on the type of data processed, a computer may be classified into the following categories:

1. *Analog Computer:* An analog computer is a device that operates on data by measuring changes in continuous physical variables like voltage, resistance, rotation etc. It operates or data in the mode of continuously variable physical quantities. An analog computer is used when data is processed continuously such as monitoring temperature, pressure. It is opposed to digital computer.
2. *Digital Computer: A* device in contrast with analog computer. A digital computer is used when data are discrete. It manipulates discrete data and performs arithmetic and logic operations on the data. In other words it operates on digital data.
3. *Hybrid Computer: A* type of computer which combines the features of both digital and analog computers. A data processing technique which utilises both analog and digital representation of data. It handles both discrete and continuous data.

Other Types of Computers

1. *Mini Computer.* A small general purpose computer such as desk top size, and four drawer file cabinet. The term mini means small which has smaller memory capacity as well as input, output capacities. Comparing other computers mini computer is lower in cost, less speed and smaller in size. It is to be distinguished from micro processor, which is smaller than mini computer. But it is

continued to use and apply to small general purpose computes. However, the difference between mini computers and micro computers is very thin. The physical size of the PDP-11 is six feet high and occupies 14 by 18 inches of floor space. This does not include a printer but does include storage devices like the magnetic cassette and the Floppy disk.

Comparing medium sized or large scale computers minis originally meant low speed, small memory, less software and few peripheral units. The minis are 16-bit machine. There are 32 bit super mini models. Earlier mini computers were applied to a single purpose specialised such as to monitor instruments or to control a machine tool or general applications in small concerns. But today mini computers are applied to complex situations. They are the most popular data processing system in business concerns.

2. *Micro Computer.* A smallest device of computer. It consists of a micro processor, storage and input output elements. A micro processor is a technique that provides the basic arithmetic, logic and control circuits necessary for processing. A micro computer with micro processors which is given additional memory and input output capabilities, then it is called as micro computer. It is a general purpose processing device. Small in size, a computer on a chip to a small typewriter size. They are easily carried from one place to another and can be placed on a small desk. The usual storage devices like magnetic tape cassettes, floppy disks etc., can be used as external storage medium. It forms an important part of the integrated information system. Today they are used in all types of organisations, small or big, schools, offices, banks, homes and other office works. Micros can be linked to a big computer. The distinction between a micro computer and mini computer is that a mini is originally designed to serve multiple users simultaneously.

3. *Main Frame Computer:* These computers have greater storage capacity and offer faster processing speed comparing other types of computer. In size main frame computers are ranging from small to a very large. The smaller main frames and super minis perform on a similar scale. But a main frame is more powerful than a typical mini and hence often called as main frame. In centralised data processing system main frame computers are used in many organisations. A number of users can work simultaneously as they support a large number of terminals. Word processors are used as terminals. They prepare thousands of paychecks, invoices, making

labels etc. The main part of the computer usually referred to the Central Processing Unit. The entire series of a mainframe models of small and large are typically lumped together under a family designation by mainframe manufactures. It permits to carry programmes framed for one machine on other models in the same family. Mainframes have been playing an important and vital role in information processing.

4. *Personal Computer* (*PC*): As the name indicates, a computer originally designed and oriented towards single use. It denotes the use of computers by individuals. A general purpose compute system. It carries programme instructions to perform a wide variety of tasks, which possess all the functional components available in larger systems. They are usually found in the home management, personal productivity. A TV set can be used to display output. It has a limited primary storage capacity. PCs can be used not only for game programme but enables the user to acquire computer literacy. They give an opportunity to become familiar about computers as to how, and when to use and utilities. Today they came in a variety of configurations side by side using television and cassette player. They are available today in different shapes and sizes like portable models, notebook sized, briefcase sized, desk-top models, transportables, etc. They are called single-user-oriented because, most of personal computers are designed to be used by one person at a time. In recent years another system has emerged, they are multi-user oriented.

5. *Super Computer:* A super computer is characterised by its very high processing speed, very large size, more storage capacity, powerful and costly computer. Only a few organisations can afford and use super computer because of prohibitive cost and processing capacity. They are of national importance and used in big scientific research and development fields like energy, space exploration, medicine, industrial technological areas like aircraft. A super computer holds 64 bits of information, so, applied to a complex computation. It is very costly, between 4 million to 15 million dollars. Gray Research and Control Data Corporation (CDC) are the important concerns producing super computers in USA. So a powerful device applied to making top secret weapons research calculations, complex calculations for petroleum and recasting problems, earth's atmosphere etc. Data of complex nature are feed into super computers.

Human-Machine Communication Process

Human thinking of ideas and artificial intelligence is the relation of human-machine communication process. A computer uses many devices to communicate with human beings. The following are the various system components in a computer towards electronic message transmission.

1. *Input*

Input in relation to computer denotes devices, media and techniques used in process of human machine communication. Pertaining to computer channel involved in the insertion of information into a processing system. There are input devices which permit direct human-machine communication. There are some input devices which require information to be recorded on a magnetisable materials such as floppy disks, magnetic tapes etc. The keyboard, the mouse, input pen, touch screen, microphone, central processing unit or components used for communication between a person and computer system.

2. *Processor*

Process means a systematic series of operations to achieve a desired result. Processor is the main component and is the heart of the computer system. A processor unit is capable of performing operations upon information inserted. There are three sections such as primary storage section, arithmetic log section and control section. In order to solve limited storage capacity of the primary storage section, a computer may have secondary capabilities known as secondary storage devices which have connected directly to the processor.

3. *Output*

Relating to a device or process involved in the transfer of information out of information inserted into a processing system. It is information transferred from internal storage of a computer to any device outside the computer. The process works for taking information out of the computer. Output devices are instruments of interpretation and communication between a person and computer. Display screens, desk top printers, magnetic tap output device, printer, graphics plotter, visual display of online work station, laser printers, micro film are some of the output devices.

Computer Communication Language

A computer has a machine language which is used directly by a computer. Language is a set of rules adopted to convey information. A language used to express programme is termed as programming language. So rules used to convey message or data. It is a system of communication which includes all the symbols, characters, and rules to be followed while communicating with computer. The machine language of a computer consists of strings of binary numbers by which the processor can directly understand. Assembly language translates the specified operation code symbol into its machine-language. High level language is a computer programming language which is nearer to natural language. It is oriented towards a particular class of processing problems. The natural letters, symbols or text can be used than by using the machine language consisting of strings of binary numbers (0s 1s).

Most of the programmes are prepared today which are written in high level language. The following are some of the major high level in use:

1. BASIC

The word basic stands for Beginners All-Purpose Symbolic Instruction Code (BASIC). It is a major high level programming language developed at Dartmouth College. It is widely and popularly used programming language with personal computers and in time sharing systems. It is an interactive language, popular because it is easy to use. It allows direct communication between the computer system and the user during the preparation and use of programme. A person with little or no knowledge of computers of programming can learn to write basic programme. Within a short period of time one can learn. Data entering is easy. It is known of simplicity. Recreational and educational programmes are usually documented in basic. School students, engineers, business managers etc., popularly use basic.

2. Fortran

It stands for Formula Translator. A high level procedure oriented programming language used to perform mathematical computations. It is also widely used to draw programmes that perform mathematical computations for scientific, engineering, statistical and selected business applications. Most of the computers now in service can use Fortran. A standard language. It consists a series of statements which supply input-output, calculations, logic, comparison and other basic instructions to the machine. A compact language serves the requirements of scientists, engineers and business statisticians for business application.

3. COBOL

The term stands for Common Business Oriented Language (COBAL). A specially designed business data processing language. A similar high level language for business application. This language is now the most widely used language for large business application. Conference of Data Systems Languages (CODASYL) is a group of representatives of computer manufactures, government agencies, user organisation, and Universities who developed and maintain the COBOL Language. The CODASYL Short Range Committee which prepared the COBOL frame work. It can be used in business data processing and can be used with personal computers. It has four divisions such as:

1. identification division,
2. environment division,
3. data division, and
4. procedure division.

The advantage of COBOL language are:

1. It can be written in a quasi English form.
2. It can be followed more easily by the non-programmers in business.
3. It does not require much documentation.
4. It manipulates alphabetic characters in a better way than Fortran. There are many COBOL business applications modules and packages.

4. PL/1

Stands for programming language/1. A similar high level general purpose programming language. It is procedure oriented language designed to combine features of COBOL, Fortran, Algol etc. It processes both scientific as well as file processing applications. It is best suited to solve a variety of business as well as scientific problems. The American National Standards Institute Committee produced PL/1 standard in 1976, in which are found features which exist in both Fortran and COBOL but it is flexible and sophisticated language. The language is more difficult to learn in its totality than Fortran or COBOL.

5. *RPG*

The letters stand for Report Programme Generator (RPG). A problem oriented language designed to generate output reports. It uses a generator to construct programmes that produce reports and function other data processing activities. A file can be updated periodically. It is specialised with file description, input specifications, calculations output. The languages is very easy to learn and use. The formal rules are limited comparable with other languages. It is more useful to generate output reports. It is an important language of small business computer.

6. *Algol*

Standards for ALGORITHMIC language. It is widely used in Europe. It was first introduced in 1958. It is an international procedure oriented language designed by a group of international mathematicians and developed by groups in Europe and the United States. It is designed and intended for use primarily for scientific and mathematical applications.

7. *Pascal*

A widely used high level computer programming language. It is named in honour of Blaise Pascal, a French mathematician, philosopher and an inventor. It is designed for use of structured programming devices. It off spring of algol, is a similar building programme found in other languages.

8. *Ada*

A similar high level computer programming language. The language is sponsored by the U.S. Department of Defence (DOD) for use in military services. The language is named in hondur of Lady Augusts Ada Lovelase, daughter of Lord Byron.

9. *Logo*

An educational language developed by Seymour Papert in 1960s. It is widely used for scientific research tasks particularly in Universities. It can be used by children to achieve talent, intellectual growth and acquire problem solving skills. They can communicate with a computer and learn graph, raw, colour and animate images.

MANAGEMENT INFORMATION SYSTEM (MIS)

A. Management

There are three basic words in the caption, namely, management, information and system. It is an essential part of the study to understand the meaning of these words. The word management means the art of managing things and getting the things done through other people. It is an art and a profession. The functions of management are planning, organising, staffing, directing, controlling, coordination. The organisations have managers who plan, set goals and direct to accomplish the goals of the organisation. The functions of the managers differ according to the position occupied, namely, high, middle or low level. Management have three levels, namely:

1. Top level management known as strategies management;
2. Middle level management called as tactical level; and
3. Low level management or supervisory level, also called as operating level. The last level is called as first line managers in charge of the employees. Top managers are responsible for overall operation of the organisation. They are top executives variously called as chief executive officer, president, chairman. They formulate broad policies and objectives of the organisation. Middle level managers are under direct control of the top managers. They are functional managers, each function is headed by manager. The functions are Finance, Accounting, Personnel, Marketing, Production, headed by a person having specialised knowledge of the function. In the organisation structure they are positioned horizontally. Operating level implement the policies of top management routed to them through middle level managers. The principles of management are:
    1. Division of work.
    2. Authority and responsibility.
    3. Discipline.
    4. Unity of command.
    5. Unity of direction.

6. Subordination of individual interests to general interest.
7. Remuneration.
8. Centralisation.
9. Scalar chain.
10. Order.
11. Equity.
12. Stability.
13. Initiative.
14. Esprit de corps.

Top Management. Middle Management. Lower Management.

B. Information

The word information implies facts told or knowledge gained or given. Information with reference to management means knowledge which the managers at different levels receive or give at a given time. It is necessary to make distinction between data, information and communication. The word data is the plural of datum, which means fact! Facts or information given from which other facts may be worked out. The facts are data, the raw materials of information, the facts are by symbols like words spoken or written, visual, action and figures. Information is not data, the data comprise of information. Data are presented by symbols, but they are not information except in a limited sense. As used in data processing in computer, information is data arranged in an order and form useful to the people who receive it. So information is relevant knowledge, produced, as the output of data processing operations and acquired by people to enhance understanding and to achieve specific purposes. Computer data processing converts raw data into information. All information consists of data, but not all data produce specific and meaningful information. The managerial functions like planning, organisation, control and coordination etc., can be discharged effectively and smoothly only when necessary information is given to the managers, who can make timely and correct decision. A timely supply of information is indispensable to make a best judgement. While communication is a process of transmission of matter by symbols. All communication consists information, but not all information is capable of communication. Communication is only a piece of information which is very comprehensive in scope. Information is like an enormous umbrella, a broad concept which covers communication as one particular type of information. Information is a global concept referring to any pattern of energy input you are exposed to. Information includes both internal and external information. Today information is a factor of production like, capital labour etc.

C. System

The word system means an arrangement of many parts that work together. The establishment of arrangement of things relating to management. A system is a group of parts that are integrated to achieve desired objective. A system has more than one element. The other two important characters of a system are integrated parts and having a common purpose of a achieving some objective. It is "a grouping of integrated methods and procedures united to form an organised entity; an organised grouping of people, methods, machines, and materials collected together to accomplish a set of specific objectives."

Computer has a group of integrated parts that have the common purpose of performing the operations.

According to Hussain and Hussain:

1. a group of interrelated or interacting elements;
2. a group of interrelated components that seeks the attainment of a common goal by accepting inputs and producing outputs in an organised process;
3. an assembly of methods, procedures, or techniques united by regulated interaction to form an organised whole;
4. an organised collection of people, machine, and method required to accomplish a set of specific functions. Thus input, output and processing devices are the three important components of system.

Definitions of MIS

Hussain and Hussain: "An information system is an organised set of components designed to produce intelligence required for decision-making. In a business context, the information is for management. The system itself has four main components: input, output, computer programmes and the processor."

Donald H. Sanderz: "A Management Information System (MIS) is a network of computer-based data processing procedures, developed in an organisation and integrated with manual and other procedures for the purpose of providing timely and effective information to support decision-making and other necessary management functions. We will use a business example to illustrate some of the elements in this definition, but MIS concepts certainly aren't restricted to business."

Jerome Kanter: "A management information system (MIS) is a system that aids management in making, carrying out, and controlling decisions. Decision-making, including the process leading up to the decision can be termed planning, and management can be defined as the planning and control of the physical and personnel resources of the company in order to reach company objectives."

After having understood the three concepts presented above, it is clear now the concept of "Management Information System." It implies a system designed to provide information to different level managers required to manage and to accomplish organisational goals through effective decision-making. An organisation is a process of continuous decision-making, a complex, dynamic and interacting. The key factors needed in a decision process are the information input. The timely availability of relevant internal information, new and additional and enteral information helps to make effective decisions. Therefore, the primary objective in developing a total management information system should be the production of detailed upto the minute summaries of the past data and the use of them to project the future activity.

Different managerial levels need different types of information to take decisions effectively. Alternatively, modern complex business organisations, or, on the growth of an organisation, more levels may be needed comparable to smaller organisation. It is, therefore, necessary to provide different types of information to managers at different levels. Top-level managers who make major policies, objectives, to them is necessary to supply objective information concerning general understanding of the organisation. Middle-level managers who implement the top-level plans, need such information to control, coordinate, allocate scarce resource and to select a particular course of action among available alternatives and the relative consequences of indifferent alternatives available to them. Operational decisions are made by the lower level managers, need detailed information relating to day-to-day operations. Computer technology is required for computerised information system.

Computerised information enables decision-making more effective. Decision Support Systems (DSSs) are the components of Management Information System. They are simulation, expert system and information centres. The designing of information system is based on what type of information is needed, why and for whom. Computer-based Management Information Systems help managers in decision-making process in a number of business areas. The business areas are raw materials, policy making, pricing, advertisements, research, accounting policies, investment decisions, product planning, marketing strategies, finance etc. Thus, "An MIS supports the planning and decision-making activities of many managers."

Simulation is a trial and error problem solving approach that is very useful in planning. Simulation models serving managers at different levels may also be integrated into an overall corporate modelling approach to planning and decision-making. An expert system is a software package that includes:

1. a stored base of knowledge in a specialised are; and
2. the capability to probe this knowledge base and make decision recommendations.

An organisation may have established information centre. The centre gives its users a direct online path into the organisation's data bases to retrieve the facts they need.

Hospital Information System (HIS)

Management Information System (MIS) which is to meet the requirements of business settings. Whereas Hospital Information System (HIS) has emerged to meet the needs of hospitals or health settings. It has many common elements as the applied with management information system. An HIS supports the planning and decision-making activities of clinics. The systems provide "management and clinical information to administrative and health care professional throughout a hospital. An integrated data base management system is used, and software modules are designed for key administrative and clinical applications."

The administrative areas cover matters like personnel, financial, materials, and infrastructure facilities. The areas for HIS are to handle financial matters like patient billing, pay roll etc. The other sub-systems are the employees, occupancy, length of stay, food service, skills etc. The storage of patients' medical records are useful for research. In so far as clinical side of the systems are concerned, the applications cover:

1. Data collection and analysis for diagnostic purposes.
2. Lab testing procedures and the analysis of lab data.
3. Patient monitoring and intensive care.
4. Pharmacy control.
5. Specialised research functions associated with such topics as assistance for the handicapped, occupational diseases and preventive and community health programmes.

ELECTRONIC MAIL/MESSAGE SYSTEMS (EMMS)

Presently messages are forwarded through postal service or sent verbally over telephone line. The computer systems now avoid the usual postal service. There are many problems associated with postal services such as:

1. The cost of sending a message through postal service is increasing.
2. It is known that postal service is relatively slow.
3. Often messages get lost sometimes.

In order to overcome the problems of usual postal services the "Electronic Mail/Message Systems" have emerged. The EMMS is also called as "Computer Mail/Message System (CMMS)." The EMMS or CMMS is a network that can store, transmit and deliver messages by electronic means. Because it has several advantages and overcoming the problems in case of usual postal services the EMMS has gained much popularity in most of the advanced countries. Even using telephone for message transmission there is no certainty that the message reaches the recipient. The presence of the recipient and willingness to take and interpret the call in the same sense are the problems associated with it. The EMMS network has been developed with a view to solve some of the problems in message distribution system.

The new concept or network facilitates transmission of large message load or information considerably at high speed. Many devices like telephone lines and hookup devices etc., are used to connect distance locations. An Electronic Computer Originated Mail

(ECOM) is a postal service system available in US. Under the electronic means the terminal or computer of the customer transmits messages with high speed, quickly, economically and accurately. The computer of receiving post office records the message, where the message is printed on a printer. The printed message is then delivered to the address. The advantages of this network are it saves typing time, addressing, mailing etc.

The mail/message systems by electronic means provide a number of functions. The system provides services like:

(*a*) message distribution system,
(*b*) transmission of documents, and pictures,
(*c*) computerised conferences.

Transmission of Pictures

Like message pictures can be transmitted by using special machines known as "Fascimile machines" or "Fax machines." Under electronic mail message systems an original document containing photographs, maps, charts and other drawings are transmitted by placing in a sending fascimile machine. The computer based fascimile systems are more useful in modern offices. The sending machine scans document containing pictures and the receiving device reproduces the scanned picture or image.

Message Distribution Service

In a message distribution services, a message is transmitted to a recipient who has a device called as "Electronic Mail Box." A written message is keyed into the system. The Voice Mail System (VMS) holds recorded voice message.

Transmission of Text

The telex system has been in use for transmitting messages through teleprinter exchange network. This is an old or conventional method for transmission of text. In this EMMS function, text is transmitted over telecommunication lines. There are two terminals in this system known as teleprinters which appear like typewriters. There are two devices, sending end terminal and receiving and teleprinter. These two distant terminals are connected at the sending end terminal, the message is keyed into the key board. The receiving end teleprinter prints the message so transmitted over the lines by the sending end terminal.

In this EMMS function the teleprinter terminals are connected to computers. Computer is also used in transmission of text. The text is keyed and appears on the screen. Under this system it is possible to check the message before transmission.

Teleconferencing

Also known as telephone conference-discussions in which practically all direct communication between the participants is carried out via the public telephone system. It is an arrangement which facilitates the speakers to communicate each other in different locations using public telephone links. Participants of the conference located in different geographical distance areas can discuss issues by using their terminals that are linked together via a telecommunication network. It helps them greatly to communicate voice, text and video signals. It is an electronic linking of geographically scattered people who are participating at the same time. It refers to the meeting of people who are geographically separated, but under this system all participating in discussions through a telecommunication system. It uses two-way voice, text or video communication equipment. Under this system the participants can interact, interface over wide distance in real time.

In recent years, big business organisations are using teleconferencing method to conduct business meetings with the concerned executives who are geographically scattered all over a region. For instance a firm having a chain of branch offices offers a network for teleconference service. The members or participants can go to their local branch and participate, and interact in discussions with the speaker, at other branches. It may be mentioned that an alternative to computer conferencing is teleconferencing. An electronic linkage of geographically scattered people, is no doubt a oral communication through a medium but without presence of persons. The advantages of face-to-face conversation cannot be obtained from teleconferencing which cannot replace them. Body movements, facial expressions which also communicate feelings, attitudes etc., cannot be seen with teleconferencing. But, on the other hand, teleconferencing offers a number of advantages like:

1. Time is saved.
2. Cost and energy are saved.
3. Travel to distant place to attend conference is eliminated.
4. No monotony or fatigue.

Participants in the teleconferencing can use facsimile devices, electronic blackboards which give chalk impressions to be reproduced on distant T.V. monitors, picture phone meeting service, and other communicating technologies to transmit opinions, facts, feelings, figures etc., over a wide distance in real time. This system literally passes papers, back and forth to one another as they talk, argue, debate, exchange, interact the important points.

This development of telecommunication resulted in TV meetings, save travel, cost, time and wearying business trips. It helps in two-way-television system, fact-to-face conversation with people at widely separated locations. The American Telephone and Telegraph (AT & T) company operates picture phone meeting service. It is possible to link 11 conference facilities that are part of the picture phone meeting service operated by AT and T Company. They are located in Atlanta, Boston, Chicago, Dallas, Los Angeles, New York City, Philadelphia, Pittsburgh, Sacramento, San Francisco and Washington.

Computer Based Conferences

In teleconferencing it is necessary that all the participants of a conference to be present or to be on line at the same time. The system uses audio and video equipment for communication. The requirement of all the participant to be on line at the same time often poses problems. Under computerised teleconferencing it is not necessary for all the participants to be on line at their terminals or personal computers at the same time. Similarly it facilitates that it is also not necessary that the participants be physically present at the same place. A computer based teleconferencing permits the participants to attend meetings at their convenience or permits conferences to be held at the convenience of the participants.

The Electronic Mail/Message System (EMMS) is a device which can be used to store and deliver by electronic means, messages which otherwise would be sent over telephone lines. An EMMS system is capable of performing a number of functions among them computerised conferences is one. The computer conference known as a computer based teleconferencing permits that the conference dialogue can be stored in computes. A participant can sit at a terminal or personal computer at a convenient time and call up any conversation not seen, make comments if any, reply to questions. The special feature of this system is many participants can speak at the same time. Thousands of people at different geographical areas can use the system. The system requires that each participant is expected to have an access to a computer terminal connected to the conference network. The participant can sit at the terminal or personal computer at a convenient time and call up any conversation and respond to any message.

There is a data base facility in the system possessing a large number of text messages. The conversation or message is entered by a member of the computer conference, which is then made available to the other members of the conference. The participant can directly write his conversation, messages and comments which will be stored in computers. It is surprising to note that in developed countries computer based conferencing has been increasingly used. There are many computer conferencing networks developed for service. For example, the informedia Corporation of Palo Alto, USA provides two computer conference facilities known as Planet and Notepad. Similarly New Jersey Institute of Technology, USA offers conference services on their network known as Electronic Information Exchange System.

In order to use these services any member of a group has to dial local access telephone number, couples the telephone to a terminal. All group members can share a file. Under these systems the subscribers are grouped topic wise or groups according to their specific topic of interest such as technology, economics, etc. A subscriber who is interested in many topics may join to more than one group. Group members may belong to corporations, governments, local authorities, hospitals, educational institutions and other non-profit organisations.

The Stockholm University in Sweden offers another system known as COM in two languages, Swedish and English.

Computer based electronic mail/message systems offer a number of advantages. A few of them are:

1. A lot of time is saved.
2. A person can sit down at a terminal according to his convenient time.
3. It avoids extensive travel and stay to attend in a conventional conference.
4. It saves money and energies of a group of participants.
5. They can attend on other important works.

6. It maintains a permanent history of all conference discussions. The discussions are recorded and stored in a computer.
7. It permits which message or conversation each participant has already seen.
8. When operated it displaces all the conference entries which have not been seen.
9. A person can directly read and write at convenient time.
10. Message are stored in a computer.

Thus government and business organisation can use profitably computer based conference to conduct periodic meetings, transmission of ideas, opinions, facts etc.

Telelecture

In Oral Communication telephone is the most popular method. Telelecture is an arrangement which enables a speaker or lecturer to communicate with several classes or meetings or conferences in different locations simultaneously, using public telephone links. A best technique for making audio-visual presentation at distance. With a arrangement of telephone department there is hook up from a speaker's office to a meeting place or class room or conference where visuals can be shown while the speaker is heard. Telephone is used in distance communication to have interface between the speaker and the listener. In several advanced countries telephone are used in distance education to provide interaction between the tutors and students. In a country like India where telephones are not within the reach of ordinary man these cannot be used in all communications. With the help of two-way hook up facility members of audience can put questions to the speaker. There are countries which are using audio conference and video conferencing. For instance, in Canada, teleconferencing is being used in several education programmes, including professional development courses, in medicine, law, teacher education, health science, business and management.

In addition to the telephone being useful for teaching purposes it can be effectively used to improve management and administration not only in educational institutions but also for efficient and effective communication in large business organisations.

World Processing

The expression word processing is pertaining to computer application to text. Like data processing by the computer, it also processes words or text. Word processing is another major application of computer to create, view, and edit store, retrieve and finally print text materials. The modern electronic offices have been using automated and centralised typing, dictation, copying, and filing information. A device which do word processing naturally, such as composing, correspondence in format, editing, revising, etc. Optical character recognisition or fascimile equipment coverts printed materials into machine readable text. A text can be stored in memory. The Keyboard is the typewriter. Text editing process cover entering, editing, and deletion of text, and printing process function includes to print, read. Computer technology is now greatly used in modern offices to transmit ideas, facts etc., into written communication. The process avoids laborious typing or to cyclostyle or print the letters. When a number of letters are to be sent to customers, it is possible to personalise each letter by printing on the word processor printer for each address. The matter can be stored in magnetic storage device, and be used to send a similar letter. The advantages of word processing are easy correction, revision, storage of message, easy creation of new documents from stored data, no erasures, overtyping on white paper, as it is the case in the case of typewriter; print charts the figures, faster and efficient than mechanical typewriters, goodwill and satisfaction of the customers. Processing is a manipulation of words. The input is through keyboard and the output may be produced on either a display screen or a printer. The common types of business communications are repetitive letters, standard documents, special reports and financial reports. The basic functions in all business communication are input processing, storage and output. Keyboard is the input component, processing unit receives instructions, coordinates the entire system, storage is a memory component receives and stores data or text for manipulation. The output may be obtained either on the screen of video display or a printer. There are many organisations today which have introduced communications technology to reduce cost, avoid delay, achieve accuracy and speed. A word processing package is used to create, view, edit, store, retrieve and print matter. Use of computer in word processing application is more important in electronic office.

Information and Communication Network

A National Conference on Distance Education in India was held in November 1986, at Ahmedabad. Prof. Ram Takwale in his paper presented at the conference, covered information Communication Network, it states: New communication technologies are helping in building up national and international information Communication Networks and a new information order is getting developed. The network has great capacity of storing, processing and transmitting information electronically, and any one having access to the network can receive any information from anywhere stored in the network. Versatility and capabilities of the network are expanding with unimaginable rapidity. With the fifth generation computers round the corner, and such technological change in the offing, in which TV electronic tube may be replaced by liquid crystal screens thereby reducing the size and cost of the television and increasing its portability and convenience, and the availability of more versatile satellites that would offer large number of channels and would link any two locations on the surface of the earth, the stage is well set for revolutionary changes, which even the best experts in the field fear to forecast. The new information technologies have, on the whole, very specialised and centralised needs for the development of their hardware. However, its mass production has made the product very economical. Further, the software developments, appropriate to local situations and requirements, necessary to use new technologies have given the technologies, the common features of being economical, versatile, having wider accessibility and decentralised nature.

The new communication technologies, with the above characteristics, will generate creative processes and activities at various localities and will effectively contribute to the creation of knowledge, which itself will become decentralised in future.

Broadcasting (radio, television) and non-broadcasting (audio and video-cassettes, computers, etc.) channels of communication network offer an excellent opportunity of creating an Educational Network. The educational network will essentially consist of storage of learning material in audio-visual and textual forms linkages through terminals with the receiver.

Information Technology

The recent information technology revolution has transformed a communication conscious human society into, metaphorically speaking, an information obsessed global village in the short span of just two decades. The course of development for the developing and the underdeveloped countries is no longer linear-sequential; it is increasingly characterised by leap fogging wherein one or more stages are bypassed in order to arrive at the state of art stage of information technology. Today, our traditional concepts of 'knowledge' and 'information' call for re-examination. "Knowledge is power" is the slogan of this decade. Distance has been whisked away, thanks largely to information technology. Sitting in our parlours, we could join about two million spectators at Seoul during this September and October and see with them the grand spectacle of the 10th Asian Games as it unfolded itself. This was made possible by the video recording camera lens that extended the range of our eye from somewhere along 10° N parallel to Seoul, at about 30° N parallel. For the first time in human history, people from different parts of this plannet can talk to see one another and be simultaneously watched by millions of viewers all over the world. Teleconferencing no longer belongs to the world of science fiction it is a reality on our national TV network. At present, our children face an incessant "information blitzkrieg." India never had such generation of knowledgeable youngsters who quite often know a lot more than their parents. Information technology has come to stay whether we want it or not and its implications in terms of accelerated socialisation and learning are quite fascinating, sometimes even ominous. The only option available to us is to ride this tigress of information technology and our skill lies in riding it to our advantage. "Knowledge and information" constitute the meeting-point between education and information technology. If we understand the range of possibilities available to us through information technology, we may be able to understand better some of the constraints that have characterised educational endeavour throughout human history and which have circumscribed its range as well as effectiveness. Like its mother 'science', 'information technology' may prove 'a faithful servant or a fiendish master' depending on how judiciously and to what purpose we successfully master it. Consequently, there is a need greater than ever before to perceive the entire gamut of possible relationship between information technology and education so that the former is made subservient to our needs.

Information, Education and Information Technology

Information experts now make a distinction between information and knowledge. Knowledge, consequently, is no longer the same as information. Information comprises data transformed into a meaningful guide for specific action. Knowledge, on the other hand, is an organised body of information that facilitates insights and judgments. To quote Stonier, "what is information at one level may be data at the next." Thus facts, data, information and knowledge constitute a hierarchical order. One of the imperceptible shifts in our social order relates to the fact that political power has increasingly become information-based; till the recent past, it was capital-based. Hence, information and knowledge are the grist common to the mills of education as well as to information technology.

Information Technology (IT) has meant different things to different persons. However, the consensus of opinion is more inclined to define IT as the technology that deals with "the collection, storage, processing, dissemination and use of information" or "new ways of storing, processing, and transmitting information brought about by rapid developments in electronics, computing and tele-communications" UNESCO has defined IT as comprising "the Scientific" technological and engineering disciplines and the management of techniques used in information handling and processing, their applications; computers and their interaction with men and machines; and associated social, economic and cultural matters. Thus IT is not entirely concerned with information processing hardware and software it has to be equally concerned with the fall-out that it generates in man's social, economic an cultural lie. Distinguishing among terms like technology (*i.e.*, total body of knowledge pertinent to the generation and innovation of tools, machines and systems), artifacts (*i.e.*, the interface between human beings and their environment enabling them to bridge the gap between their native insufficiencies and demanding and complex milieu), coping (*i.e.*, the manipulation of three essential resources—matter, energy and information) and manipulation (*i.e.*, various processes encompassing producing, processing, storing transmitting and consulting) as various aspects of IT. Hamelink defines IT as "the aggregate of scientific/technical disciplines basic to the product of devices (tools/machines) and systems for the capture, transportation, storage, processing and retrieval of voice, text, numerical and pictorial information."

The following survey of operations related to IT as illustrated in Figure should help us to understand its range.

Contrary to popular belief, IT has three forms, viz., primitive, intermediate and super also called low IT, mid IT and Hi-IT. IT provides the essential infrastructure for an unprecedented variety of human activities due to increased significance of resource information in various fields. Its effects are not limited to a section of society; it influences all people at all times. It has been hypothesised that "the most advanced stage of information society will be high mass knowledge creation society. The spirit of the information society will be the spirit of globalism, a symbiosis in which man and nature can live together in harmony, consisting, ethically of strict self-discipline and social contribution."

Operation × Devices Spectrum of IT

Operations	*IT Devices/Systems*
Capture	(*a*) remote resource sensing satellites (*b*) radar systems (*c*) electronic camera (*d*) VCR systems (*e*) video discs (*f*) optional character recognition
Transportation	(*a*) coaxial cable (*b*) optical fibre cable (*c*) microwave link (*d*) communication satellite (*e*) cellular mobile radio (*f*) laser beams (*g*) fascimile transceivers (*h*) videophone (*i*) electronic teleprinters (*j*) modems (*k*) mutiplexors
Storage	(*a*) memory chips (*b*) magnetic film/tape/drum (*c*) holography (*d*) laser emulsion (*e*) microfilm

(Contd.)

Operations	*IT Devices/Systems*
Processing	(*a*) integrated circuits (*b*) computer software (*c*) peripheral equipment
Retrieval	(*a*) high definition television (*b*) teletext (*c*) videotex (*d*) pay television systems (*e*) on-line databases/data banks

Education has all along been an activity related to a very sensitive area of human relationship—the development of children. Transmission of knowledge and information have been central to educational endeavour throughout its history. Expert and lay opinion might have differed about other purposes of education but so far as transmission of knowledge and information is concerned, they have been almost unanimous. Educational systems have always been expected to enable its consumer learners to acquire maximum knowledge and information in minimum time to promote the simultaneous progress of the individual an society. Education has occasionally been described as 'the knowledge industry'.

IDEAL SYSTEM AND USE OF ELECTRONIC MEDIA THROUGH MIS

Management Information System (MIS)

The ideal information flow should have:

- Simple Comprehension
- Easy Input
- Distortion Free Transmission
- Efficient Analysis
- Quick Feedback
- Effective Corrective Action

Simple Comprehension

The personnel involved in the input stage (that is, AWW) should be fully aware of the need for the data. Unless the input end is convinced of the necessity and purpose of her job, the input action would be mechanical without her heart in it. This underlines the need for proper training and orientation.

Easy Input

The collection of data and its input should be kept on a need to do basis. Wherever possible human efforts should be kept to a minimum and repetitions should be avoided. This is all the more important because the person doing the basic input is the AWW and her time is most important as she is the cutting edge. This underlines the need for Operations Research in all aspects of form management.

Distortion Free Transmission

The quality of the information depends on the quality of the transmission. Anyone who has played Chinese Whispers would understand that the more hands that process the data, the higher the distortion. The input of data should be kept at a minimum. Once the basic data has been entered in the AW, it should only be merged at 'different levels without any extra keystroke inputs. Today data is filled in mechanically at several levels. This underlines the need for electronic processing at all levels.

Efficient Analysis

Once the data reaches a level it should be analysed for use at that level. Presently each level just does the task of merging mechanically and the analysis is done at a distant level and, therefore, loses its immediacy and effectiveness. This underlines the need for computerisation with need based software at different levels.

Quick Feedback

The whole purpose of MIS is to provide feedback. This should be quick so that corrective action can be taken effectively. Delays in feedback causes the response mechanism itself to become careless. There is a need for flow of feedback from all levels of analysis.

Effective Corrective Action

This is the ultimate objective of MIS. The best system is one which is self-corrective and can dynamically react to the feedback received to keep on improving upon itself. This underlines the need for proper training and orientation at the implementation level.

Electronic Media in MIS

Advantages

1. Reduces labour/keystrokes
2. Faster assessment
3. Faster and easier retrieval
4. Economical storage
5. Effective analysis
6. Different parameters can be highlighted for the same data
7. Saves trees

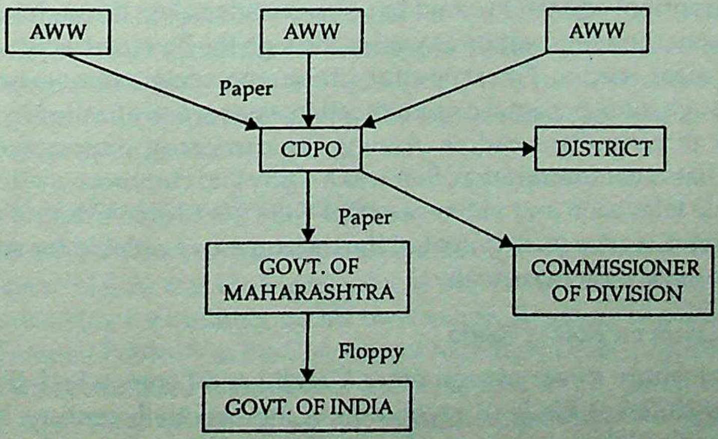
Problems in Implementation

1. Obsession with paper
2. Fear/awe of media
3. Fear of loss of records
4. Fear of wrong fixing of responsibility
5. Unwillingness to displace power structure
6. Age factor

Needed

1. Training at all levels for attitude change
2. Training hands on
3. Refusing to take paper data
4. Sending reports electronically
5. Software development

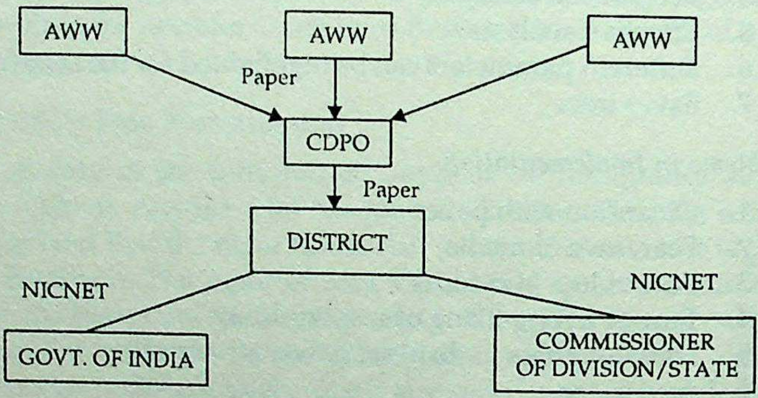
The Present Flow of Information


AWW
AWW
AWW
Paper
CDPO
DISTRICT
Paper
GOVT. OF MAHARASHTRA
COMMISSIONER OF DIVISION
Floppy
GOVT. OF INDIA

Excessive Paperwork and Duplication

THE IDEAL FLOW

- Data to be sent electronically.
- The Monthly Reports should only highlight/summarise strengths and weaknesses for corrective action.



MISUSE OF ELECTRONIC MEDIA

With less than a fifth of the population literate at the beginning of the First Plan, and considering that attainment of universal literacy was bound to be a long haul, immediate intervention through non-formal education was necessary in order to inform and mobilise the people for broad-based national development.

(*i*) Radio : Lost Opportunity

Non-formal education could have been undertaken through inter-personal communication as well as through the literacy-free among the mass media. The scope for promoting social consciousness through inter-personal communication was severely limited by the lack of committed cadres. Among the carriers of impersonal or mediated communication, film was a costly and cumbrous medium, while television and video-cassettes were yet to arrive. Radio was at that time the most potent of the instruments available for social education on a mass scale.

(*a*) *Lenin on Role of Radio*

Born within a year of each other, Gandhi and Lenin, who led two very different kinds of revolution in the twentieth century, both recognised the potency of radio as a means of mass communication.

Gandhi attached importance to the cultivation of moral strength by the individual rather than the indoctrination of men in the mass. He made a statement, brief but significant, about radio; "This is a miraculous power. I see Shakti, the miraculous power of God."

Lenin who believed a central planning by the State, envisaged the possibilities of radio communication more systematically. In a letter to Joseph Stalin, he wrote in 1922;

"Appended are two reports, the first from an expert in electricity about radio telegraph and telephone communication; and the second from a prominent specialist and inventor in radio engineering. These reports show that it is technically quite feasible to broadcast human speech over any distance by wireless. Furthermore, it is also possible to use many hundreds of stations that could broadcast speeches, reports and lectures delivered in Moscow to many hundreds of places throughout the Republic, situated hundreds and under certain conditions, thousands of versts (a 'verst' is a Russian measure of distance equivalent to 1.067 kilometers) away from Moscow. I think from the standpoint of propaganda and agitation, specially for those mass of the population who are illiterate, and also for broadcasting lectures, its absolutely necessary for us to carry out this plan. " Lenin hailed radio as a "newspaper without paper" and "without distances." He offered talented inventors and engineers all out assistance and encouragement for further innovations in radio technology. He regarded the matter as of "immense importance, for with a loudspeaker with the receiver which has been developed in such a way that it will be easy for us to produce hundreds of receivers, all Russia will be able to hear a newspaper read in Moscow." Within the democratic structure of free India radio could have been developed as a truly mass medium. But it was not assigned a role comparable in importance to what Lenin envisaged for it in a centralised, single-party system.

(*b*) *No Reorientation after Freedom*

Unlike those who were to step into his shoes in the office of Prime Minister, Nehru was too big to need or want to use the medium of broadcasting for building up his own image. Replying to a debate on External Publicity in the Constituent Assembly which functioned as the provisional Parliament of India, he said on 15 March 1948: "My own view of the set up for broadcasting is that we should approximate, as far as possible, to the British model, the British Broadcasting Corporation; that is to say, it would be better if we had a semi-autonomous corporation under the government, of course with the policy controlled by the government, otherwise being not conducted as a government department but as a sem-autonomous corporation."

Now, I do not think that is immediately feasible. I have merely mentioned this to the House. I think we should aim at that, even though we may have many difficulties. In fact in most matters we should aim at the same semi-autonomous corporation, the policy and other things being distantly controlled by the government but the government or government departments not interfering in their day-to-day activities. Jawaharlal Nehru's impulses were liberal but he did not always act on them. Until Nehru's death in 1964, nothing was done to make All India Radio autonomous. Thereafter, AIR was reduced, in its programmes of news and current affairs, to a mouthpiece and propaganda organ of the Prime Minister and the political party for the time being it, power at the Centre.

If in Jawaharlal Nehru's time there was no political misuse of the medium, there was no commercialisation of it either. This was a significant contribution, though of a negative rather than positive character.

Nehru's attitude to commercial advertising was in the tradition of the great practitioners of educative journalism—or development communication as we would call it today. Annie Besant, after she acquired the *Madras Standard* and ran it as the daily *New India* from 1914, wrote to a friend that the first thing she did was to "clear off all the coarse advertisement." Gandhiji excluded advertisements altogether from his journals. He was against the multiplication of wants (as distinct from needs), and expressed the wish in the course of an article in *Young India* in October 1919 that "there were, for each province, only one advertising medium—not a newspaper—containing innocent, unvarnished notices of things useful for the public."

In *The Discovery of India*, written in 1944 during his last spell of detention, Nehru said: "The advertiser is one of the symbols of our age with his continuous and raucous attempts to delude us and dull our powers of perception and induce us to buy unnecessary and even harmful products." In an address to the All India Newspaper Editors' Conference at Allahabad on 16 February 1946 he said: "The quality of advertisements appearing in some newspapers sometimes pains me. I appeal to the editors that they should exercise a strict censorship over advertisements so that undesirable advertisements are not accepted."

Referring to commercial advertisements carried by Radio Ceylon and other foreign broadcasting systems, Nehru said in 1963: "Personally I react strongly if an advertisement comes through radio. My reaction is never to encourage that advertiser. What does he mean by interfering with my peace of mind? It angers me when it suddenly comes in; it upsets me. But that is not the reaction of most others, I suppose. Otherwise, why should advertisers advertise?"

Although Nehru preserved All India Radio from misuse for political and commercial advertising, there was no radical reorientation of the medium. During the nearly 17 years of his prime ministership, radio continued to play its old role of providing entertainment and information of interest to the urban middle and affluent classes who alone could afford the luxury, in the pre-transistor age, of owing a radio set. Radio was not turned into an instrument for promoting broad-based development. District level stations could have been established, in order to provide folk entertainment and to disseminate among the rural poor, through free access to radio sets at public places, information relevant to the improvement of their condition such as laws on land redistribution, tenancy reform or minimum wages, and programmes like those for adult education, community development and the empowerment of panchayats to draw up and implement development programmes to meet local needs.

(c) *Top-Level Expansion, Urban Bias*

The pattern of expansion of All India Radio continued to be what it had been prior to independence.

It was in Bombay that the first radio station was established, in the private sector, by the Indian Broadcasting Company in 1927. Inaugurating it, the British Viceroy, Lord Irwin, said: "India offers special opportunities for the development of broadcasting. Its distances and wide spaces alone make it a promising field. In India's remote villages there are many who, after the day's work is done, find time hang heavily enough on their hands, and there must be *many officials and others whose duties carry them into out of the way places where they crave for the company of their friends* and the solace of human companionship. There are of course, in many households, those whom social custom debars from taking part in recreation outside their own homes. To all those and many more, broadcasting will be a blessing and a boom of real value." The words emphasised in this passage and spoken more than six decades ago apply with even greater force today to the role of Doordarshan as a forger of solidarity among the middle and upper classes that rule the country, bringing accustomed entertainment and familiar faces and voices to members of the civil, police, para-military and Defence services posted in various parts of the country, not to speak of the geographically mobile middle and upper echelons of private and public sector enterprises.

The second radio station was opened by the Indian Broadcasting Company in Calcutta on 26 August 1927, and the third by the Madras Corporation in 1930. Brought under the control of the Government of India as the Indian Broadcasting Service from 1 April 1930, the broadcasting system grew over the years with the opening of new stations as follows:

10 September 1935: 'Akashvani' station at Mysore, capital of the princely State of that name.
1 January 1936: Delhi station of the Indian State Broadcasting Service, redesignated from 8 June 1936 as All India Radio.
2 April 1937: Lucknow station.
1 May 1939: Baroda station: foundation stone laid.
16 May 1939: Trichinopoly station.
1 December 1947: Jammu station.
26 January 1948: Patna station.
28 January 1948: Cuttack station.
1 July 1948: Gauhati station.
16 July 1948: Nagpur station.
12 October 1948: Vijayawada station.
21 October 1948: Srinagar station.
1 February 1949: Allahabad station.
4 March 1949: Ahmedabad station.
16 May 1949: Jullundur station.
8 January 1950: Dharwar station.
1 April 1950: All India Radio takes over the broadcasting stations of the former princely States at Trivandrum, Mysore, Hyderabad and Aurangabad.

14 May 1950: Kozhikode station.
2 October 1953: Poona station.
13 April 1954: AIR takes over the station at Srinagar.
16 December 1954: Jammu station is taken over by AIR.
4 January 1955: Rajkot station.
9 April 1955: Jaipur station.
22 May 1955: Indore station.
16 June 1955: Simla station.
2 November 1955: Bangalore station.
31 October 1956: Bhopal station.
27 July 1957: Ranchi station.
January 1963: Kohima station.
June 1963: Port Blair station.
August 1963: Imphal station.
6 March 1966: Pasighat station.
November 1966: Mathura station.
November 1966: Aizawl station in Mizoram.
November 1967: Pondicherry station.
25 June 1971: Station at Leh, in Ladakh.
11 August 1972: Silchar station.
September 1974: Station at Tawang, in Arunachal Pradesh.
2 February 1976: Darbhanga station.
8 May 1976: Rohtak station.
1 August 1976: Chattarpur station in Madhya Pradesh.
11 December 1976: Mangalore station.
26 December 1976: Ambikapur station.
22 January 1977: Jagdalpur station.

This chronology of the first fifty years of broadcasting in India shows that when the expansion of stations was resumed after the interruption caused by World War II, the pattern was the establishment of stations at each State Capital, followed by stations at other big urban centres within a State. Everywhere, the nature of the programmes—both music and spoken-word—have been predominantly such as to appeal, and be intelligible, to the middle and upper classes living in urban centres, and not to the rural masses whether tribal or non-tribal. An exception is the time applied, particularly by stations in the north-eastern region that were established after the hostilities of 1962, to news bulletins and talks in tribal dialects.

According to a fact sheet prepared by the Audience Research Unit giving the position as of 31 December 1987, the Home Service-excluding Vividh Bharati—consists of music to the extent of 38.43 per cent, news 22.38 per cent and spoken word 39.19 per cent. The music programmes comprise, to the extent of 64.01 per cent, three categories which are of interest almost exclusively to the middle and upper classes: classical music (28.41%); light music (21.41%) and devotional music (14.19%). Film music, which is of very wide appeal, accounts for 19.37 per cent. Western music occupies 4.81 per cent of total music time, and folk music 11.81 per cent.

Out of the total time of spoken word programmes, those categorised as 'educational' occupied 29.69 per cent. The distribution as between target audiences was: rural 12.68 per cent; school/university 7.86 per cent; women 3.84 per cent; industrial workers 3.25 per cent; and children 2.06 per cent. As against the rural-interest spoken word programmes accounting for 12.68 per cent, talks and discussions on current affairs, in language that only the educated can follow, claimed as much as 26.87 per cent of total spoken word time.

A medium of communication can, after all, address itself only to the audience actually available to it. AIR's ability to contribute to rural development in general and in particular to promote awareness of anti-poverty programmes, adult education and health is strictly limited by the fact that only a fifth of the total number of radio receiving sets in the country, estimated at 80 million in 1987, are in the rural areas.

(*d*) *Tokenism School Broadcasts*

A token contribution to development used to be made by some AIR stations even in the pre independence period. Rural programmes began to be broadcast from Delhi in June 1936. School broadcasts were inaugurated in October 1938, and broadcasts for colleges from Madras station in November 1939.

Programmes for schools are now produced and broadcast by 44 stations, and relayed by thirty other stations. Fifth per cent of the programmes are meant for primary schools. It is instructive to compare the number of schools in the country with the number and distribution of school radio sets State-wise.

Number of Schools in the Country

	1950-51	*1980-81*	*1984-85 (Estimates)*
Primary	2,09,671	4,85,538	5,55,000
Middle	13,596	11,67,447	1,40,000
High-Higher Secondary	7,288	51,549	60,000
Total	2,30,555	6,53,579	7,50,000

The total number of schools with radio sets was 1,16,975 as on 1 January 1983, as against the likely total of about 7,00,000 schools of different categories. No figures were available in the Directorate-General of AIR of the distribution of the schools with radio sets as between urban and rural areas. As will be seen from the following figures of State-wise distribution of the school radio sets, there is considerable disparity between need on the basis of a State's population and the availability of radio sets in schools.

State-wise Distribution of School Radio Sets

Andhra Pradesh	10,500
Assam	5,400
Bihar	4,000
Gujarat	20,230
Haryana	2,190
Himachal Pradesh	456
Jammu & Kashmir	1,381
Karnataka	1,817
Kerala	6,200
Maharashtra	10,143
Madhya Pradesh	1,500
Meghalaya	132
Orissa	900
Punjab	2,100
Rajasthan	2,102
Tamil Nadu	36,111
Uttar Pradesh	3,775
West Bengal	5,022
Other States & Union Territories which furnished data	2,616

Uttar Pradesh, the most populous of the States, had only 3,775 school radio sets, and Bihar, the second most populous, only 4,000. In contrast Gujarat ranking tenth in population strength had 20,230. The reasons are worth investigating. Is insufficiency of reach of radio stations originating or relaying programmes in the local language among the reasons? Or that the programmes are not interesting and/or in language difficult for school children to follow? In addition to the urban-rural distribution of schools having radio sets, the break-up of such schools as between primary, middle and secondary needs to be ascertained. It has been the experience of those involved in school broadcasting that secondary schools have little use for broadcasts, though broadcasts for primary schools are generally well received, specially in single-teacher schools where they at least give the teacher some relief. On the other hand, secondary schools have little use for broadcasts, though they are now syllabus-related, since it is all that the teachers can do to take the students through the prescribed text-books. Moreover, coordination of the school time-table—specially when the same class is divided into different sections—and that of the AIR station is next to impossible. Broadcasts can be recorded and played at the right time, but this will entail cost which only the better-endowed schools can afford, and effort which only highly motivated teachers will undertake. Even the maintenance of a transistor radio receiver is a problem since each replacement of two to three batteries will cost about Rs. 20. This raises the crucial question: how many of the one lakh odd school radio sets are in working order, and actually being utilised?

As regards intelligibility and interest, perusal of a programme guide on radio broadcasts during 1988-89 for classes VIII, IX and X, brought out in Telugu for radio equipped schools served by the Vijayawada, Hyderabad, Cuddapah and Visakhapatnam stations, suggests that the programmes can be followed by school teachers, not students.

(e) Tips for Fanners, Not Farm-hands

The first major experiment, after independence, in the use of radio for rural development was the Farm Forum project launched by the Pune station on 19 February 1956 in implementation of a programme drawn up by All India Radio with the assistance of UNESCO. Subsequently similar broadcasts were undertaken by other stations.

As pointed out by Mehra Masani, who retired as Deputy Director General of AIR after a long and distinguished career in broadcasting, the project was modelled on the Farm Radio Forums of Canada. Members of listening groups of 15 to 20 persons were expected to discuss the information and suggestions contained in the programme and to decide on a plan of action. Mehra Masani says: "After the first flush of enthusiasm the collective listening has dwindled… No one knows how many forums are active. The reasons for the failure are not far to seek. AIR lacked the resources… The machinery for carrying the reactions of the forums to the programme planners was weak. In Canada the forums were the joint responsibility of the Canadian Broadcasting Corporation, the Canadian Broadcasting Federation of Agriculture and the Canadian Association for Adult Education. While the broadcasts were the responsibility of the broadcasting organisation, the other two provided the money for running offices to look after the forums. Unfortunately AIR could not afford anything like this organisation. Without a close contact between the radio stations and the forums, their success was only partial at best… It is the farmers in the age group 30-50 with a middle-school level of education who are most keen on listening to radio programmes which would help them to improve their productivity and thus their standard of living. The poor and illiterate farmer fails to derive any benefit from the broadcasts."

Apart from the forums, AIR stations broadcast tips for farmers every day on agricultural operations relevant to the season, and on weather conditions. The rural programmes also convey information on new and high-yielding varieties of seeds and how to utilise them to best advantage. There is no doubt that such information has benefited many farmers. A widely quoted instance is of a new variety of rice which was popularised by radio stations in Tamil Nadu and therefore came to be known as 'radio rice'. But there is little in these programmes for the landless agricultural labourer or the village artisan. To quote Mehra Masani's summing up: "As the greater part of AIR's audience today belongs to the same classes and sections of society from which it was drawn twenty-five years ago, the programme pattern has also remained the same… This confirms that at no time after India became independent has an attempt been made to recast the broadcasting service to cater for the under-privileged listener. The majority of programmes continue to be directed to the educated and semi-educated in cities."

(*f*) *Abandonment of Community Listening*

Had community listening not been given up as a Centrally assisted scheme in 1969, it might have retained its underprivileged rural listeners while those who could afford their own receiving sets began to listen indoors. The composition and size of the audience for community listening might have led to the broadcast of more information of relevance and interest to the rural poor. Unfortunately, a number of factors led to the decline of community listening.

Started in 1954-55 as a Centrally sponsored scheme entailing 50 per cent subsidy to the States on the initial cost of the receiving set and ancillaries, it ran into the organisational problem of replacing wet batteries. Substitution by transistorised sets was not practicable either, because of the shortage of battery cells at that time. Secondly, a Committee on Broadcasting and Information Media (popularly known as the Chanda Committee), formed by the Government in 1964, recommended in its report (April 1966) the discontinuance of community listening since the authorities in many States had failed to organise and operate the scheme satisfactorily. The Committee recommended that listening in rural areas should move from the community set to the village home through the supply of one-band receivers at a low price by adopting correct industrial and fiscal policies. Thirdly, the general elections of 1967 resulted in the formation of non-Congress governments in several States. They did not like the proliferation of Centrally sponsored schemes, which they saw as resulting in the distortion of locally relevant priorities by the bait of Central financial assistance. At a meeting of the National Development Council in 1969 the baby of community listening was thrown out along with the bath water of excessive centralism. It was decided to discontinue the 50 per cent Central subsidy for installing community listening sets. An exception was made for political reasons in the case of Jammu & Kashmir where the scheme continues to be handled by All India Radio, even as the installation and maintenance of community viewing TV sets in the valley is looked after by Doordarshan.

At the peak of the functioning of the community listening scheme the number of CL receivers was estimated at about 90,000. Had the scheme been continued and expanded, and the problem of maintenance logistics been solved, instead of taking the easy and lazy course of scrapping the scheme, the relevance of radio for the rural poor might have increased. Revival of the scheme country-wide has not been considered, on the specious argument that 'everybody' has a transistor. This is an instance of the urban picture being mistaken for the all-India scene. The spectacle of the farmer carrying a transistor set to his field is confined to areas like Punjab, Haryana, western Uttar Pradesh and coastal Andhra where there has been a Green Revolution. Very few own radio sets in the rural areas of eastern Uttar Pradesh, Bihar, Orissa or Telangana. The landless living below the poverty line certainly do not.

(g) *AIR Goes Commercial*

On 3 October 1957 AIR introduced a service known as Vividh Bharati, full of film music (to the extent of 60%) besides other light music, interspersed with news bulletins, short plays, etc. This was done in order to counter the pull of Radio Ceylon which was broadcasting Indian film music. Though radio listenership went up by leaps and bounds with the broadcast of the Vividh Bharati service by more and more stations, creating an audience of tempting size for the commercial advertiser, it was out of the question for AIR to go commercial as long as Nehru was alive. Commercials were introduced on 1 November 1967, within two years of Indira Gandhi becoming Prime Minister. Unlike Nehru, his successors felt the need to project their image through the medium of radio, and subsequently television, and to disseminate news selected and slanted to present in favourable light the party in power at the Centre. This public relations effort was undertaken as a counter to the Press. Several newspapers with a large circulation criticised Indira Gandhi's policies from a conservative standpoint, as the time of the nationalisation of banks and abolition of princes privy purses. This was in 1969, when she adopted a populist platform to mount her campaign against the older guard who controlled the Congress. Some other newspapers were critical of the government from a radical standpoint. They carried news—of rural poverty and exploitation, corruption in the administration, and the like—which was unflattering to the government. The Press had been critical in similar fashion, both from the Right and the Left, in Nehru's time too, but he did not mind.

The easiest way to stimulate the purchase of radio sets and widen the exposure through radio to the Prime Minister and to news about the government's achievements and intentions was to provide more and more of popular film music. The purchase of radio sets was further encouraged by abolishing, in August 1980, the requirement of paying a licence fee in respect of one-band and two-band receivers. The production of radio receiving sets has gone up steeply and stood in 1989 at 8 million, as estimated by the Department of Electronics.

The abolition of licence fee for single-band and two-band radio sets has meant forgoing the greater part of the substantial revenue from broadcast receiver licences, which had been increasing over the years as follows:

Revenue from Radio Licences

(Rs. crores)

1974-75	19.83
1975-76	26.93
1976-77	27.54
1977-78	28.96
1978-79	26.11
1979-80	36.46

According to the annual report of the Ministry of Information and Broadcasting for 1987-88, there were 29 commercial broadcasting centres. Ten per cent of the total broadcasting time from these centres is allotted to advertisements. From April 1982, the primary channels of AIR stations are also carrying commercials. In reply to a question in the Rajya Sabha on 15 March 1982, the then Minister of I & B, Vasant Sathe, outlined the following phased programme; from 1 April 1982, commercials would be broadcast before and after the national news bulletins in English and Hindi, both in the morning and evening; thereafter, these would be extended to slots before and after national news bulletins in regional languages, regional news bulletin, women's and rural programmes, and in between popular light music programmes. AIR's income from commercial advertising has increased steeply over the years.

AIR's Income from Commercials

(Rs. crores)

1980-81	12.23
1982-83	15.51
1983-84	16.07
1984-85	15.69
1985-86	19.82
1986-87	24.00
April-Oct. 1987	14.86

Commercial advertising on AIR reflects the change of life-style, imitative of the West, among the middle and upper classes. A popular commercial jingle used to be, "Mummy, Mummy, Modern Bread!" Children in the majority of Indian families neither eat packaged and branded bread, nor do they 'mummy' their mothers. However, since radio sets are within the reach also of the lower middle class and of industrial labour, the products advertised are not as expensive as the goods and services advertised by Doordarshan.

(*h*) *Local Stations Lack Resources*

There is a long history of recommendations made to the government for establishing district-level radio stations for local broadcasting in support of the development process.

The Chanda Committee said in its report (1966) that local-interest programmes must be broadcast over low-power transmitters located at the headquarters of each of India's (then) 400 districts. Each station would serve one or two million people. This would ensure that the programmes would be relevant to the specific problems of people in comparatively small areas. The local station should be allowed to modify or add to centrally planned messages about development, with appropriate local inputs. News should be locally prepared. Operators of small-town radio stations in the U.S.A., Australia and elsewhere had found, the Committee pointed out, that comprehensive local news coverage is the single most attractive programme which makes listeners forsake the national networks in favour of their local station. Village folk are interested in district developments and the activities of the Taluka Panchayat Samiti, and not in those of the remote State legislative assemblies and the even remoter Lok Sabha and Rajya Sabha. They want news of the work of co-operatives, about rural industries, irrigation rates, the construction of village roads, a new bus service, problems of landholders and agricultural labourers, and all those things that affect their lives. A local station an collect such news from district officials, panchayats, social workers, teachers, traders and others, and also give timely warning of flooding of roads, breakdowns in the bus service, and so forth. Local broadcasting alone could ensure coordination with district authorities and with extension services.

The document on the Fourth Plan (1969-74) wanted the correction of information imbalance in the country. Though it did not specifically suggest local radio stations, they would have been the appropriate means of realising the objective which the Plan document set out in these words: "In the spread of information facilities, the imbalance in favour of urban concentrations and prosperous areas continues… There is need for a deliberate attempt to inform the people in the rural areas, and in particular those in backward regions, about the specific schemes in agriculture, forestry, road construction, marketing, the supply of credit and other inputs, so that the benefits of these programmes are more widely spread. Even in a single region or homogeneous area, there will be more than a single audience to be approached. These will have to be identified and reached."

Next came the report in February 1978 of the Working Group on Autonomy for Akashvani and Doordarshan, appointed by the Janata Government in August 1977 with B.G. Verghese as Chairman. It ably summed up the principles of social education through the electronic media: "Instructional broadcasting presupposes specific small audiences in terms of age (for example, school broadcasts) and in terms of agro-climatic and socio-cultural variables including language. Decentralised and participative development from below suggests the need for decentralised messages through local radio and television. We would envisage the station as something more than a single studio-transmission complex, distant and seemingly exclusive, or even inaccessible to the people it is intended to serve. Instead, we envisage at the local level a small and relatively simply equipped 'mother station' with a cluster around if of small recording units and programming facilities which will help ring broadcasting to the people and the people to broadcasting. This consideration applies both to radio and television."

Nothing was done in pursuance of this recommendation. It was only in the document on the Sixth Plan (1980-85) that local broadcasting was envisaged for the first time. The Plan included a "pilot scheme for local radio broadcasting… radio stations with low power transmitters for local areas to augment the development-oriented programmes for such regions. The pilot scheme visualises location of such stations in areas with large population of Scheduled Castes and Scheduled Tribes."

This seemed to hold out the promise of a revolution in India broadcasting. The 'working instructions' for local radio stations issued from the Directorate-General of AIR in New Delhi left little to be desired. The circular incorporated the approach to local broadcasting recommended by the Chanda Committee and by the Verghese Working Group. However, as will be seen presently from the experience of the Nagercoil station in Tamil Nadu—the first to come up out of the half dozen local stations provided for in the Sixth Plan—the resources made available for local broadcasting are too little for achieving the intended purpose.

The 'working instructions' document reads as follows:

"Local Radio is a new concept in broadcasting in India. Each of the stations, serving a small area, will be basically a utility service and reach right into the heart of the community which will use the microphone to reflect and enrich its life and artistic expression. What distinguishes local radio from the regional network will be its down-to-earth, intimate and uninhibited approach. Programmes will be area specific. They will be flexible and spontaneous, enable the station to function as the mouthpiece of the local community. It will demolish the division between the broadcaster and the audience. Local authorities, police, emergency services, adult educationists, schools, transporters, farm scientists, entertainers will all look up to the local radio for a sustained community service. Its accent will be on handling the local problems extensively, local news and views and local talent, and it will be available to a broad spectrum of the local people. Comprising predominantly field-based programmes, it will adopt a down-to-earth character and establish a two-way communication system between the listeners and the extension agencies of various government departments. Local events and functions, games and sports, exhibitions and fairs, meetings and debates, cultural or literary, will find ample coverage. Its 'access' programme will provide opportunities to distinct groups in the community to present their own programmes affording scope for the articulation of local talent and views. It will organise a number of 'helpline' services to the listeners—in employment, education, housing, law, and even family problems. The local aspirations will find fulfilment through the local radio."

Working Instructions

1. Flexibility in programming being the main characteristic of local radio, the station may take the Fixed Point Chart as a broad guideline and make deviations as and when required. Directorate may be approached only when

changes involving staff and funds are made. There will be no need to refer to the headquarters for effecting changes in the Fixed Point Chart. Instead of preparation of quarterly schedules the station may prepare fortnightly plans.

2. The station's main emphasis may be field-based programmes. It must be the objective to cover every village in the district by turn. Inadequacy of staff for Outside Broadcasts could be overcome by casual bookings. The station may use cassette recorders which could be replenished by local purchases.
3. The station may devote broadcast effort mainly to programmes of farming, rural development, health, family welfare and education. The agencies engaged in these fields may be tapped for supply of materials, scripts and recordings. Programmes of education could be supplemented by obtaining recordings from neighbouring stations in the State and from the Directorate of Transcription and Programme Exchange Services.
4. Programmes may be presented in the local dialect/ language by engaging, if required, casual comperes who may present the programmes in a breezy, chatty conversational style.
5. The station may make provision for programmes of special audience like women, children, youth, labour, farmers etc., and groups, associations, organisations engaged in their welfare may be encouraged to produce and present programmes.
6. The station may relay one news bulletin in the local language originating from Delhi, and another from the State capital. Stations situated in the Hindi zone may take one Central Hindi news bulletin. No other news bulletin is compulsory nor recommended.
7. The station will not relay any programmes from Delhi/ State capital except the broadcast of the President and Prime Minister. Mandatory relays will not apply to local radio stations.
8. The stations will be free to indent programmes from other stations and use them at their discretion, keeping in view listeners' interest in such programmes.

The circular goes on to deal with the question of payments ("The scale of fee payable to unauditioned artists will be on par with the fee scale for Yuva Vani artists. Station will be free to fix the fee at any point within the fee range."); travelling and daily allowance ("The stations may make, in addition, payment towards TA/DA if the distance from the headquarters is 8 kms. and above. TA will be only second class rail fare, and DA at a flat rate of Rs. 25 per day. No fee will be payable for escorts of women artists or children."); and advisory committees ("The station may have an informal advisory panel. It may comprise important persons representing different interests like education, agriculture, extension services, panchayats, cooperation, small industries, health and hygiene, women, youth and social welfare and cultural organisations. No consultancy fee is payable").

There is a lack of realism in the stipulation that no travelling or daily allowance may be paid to the escorts of women or children who participate in programmes. Surely this is no way to promote the participation of rural women. The staffing pattern for the district-level stations has no provision for a news unit, whereas the broadcast of news of local interest is a major factor in the service expected of a local station. The Nagercoil station, with a 1 KW transmitter that can cover only part of the Kanyakumari district of Tamil Nadu, went on the air from 30 October 1984 with a single transmission in the evening (6 p.m. to 9 p.m.). Headed by an Assistant Station Director with the requisite engineering and administrative staff, on the programme side it had a Farm Radio Officer (a post sanctioned but unfilled during the entire first year of the station's working); two Programme Executive; and two announcers besides a tape librarian and a production assistant. The station has one vehicle only. No wonder that outdoor recordings formed a small part of the programmes. The station could put out only a fortnightly 10 minute bulletin of local news.

The plus points of the station's performance are brought out in a paper prepared by the first Assistant Station Director of the Nagercoil station, K. Anjaneyulu, for his principals. (A summary of the paper has been published in an American journal devoted to development communication.) Following are some points from the paper:

"The 'wandering mike' captures" the joys and sorrows of people of different walks of life, like a wandering mendicant, a toiling labourer in a tea estate, an agricultural labourer, a worker in a cashew-nut factory, a domestic maid, etc.

"A myth centering round a temple here, the history of a church or mosque there or the latest details pertaining to two rival groups of fishermen concerning their fishing rights sanctioned by tradition—all these are put across."

"If there is a public grievance about the drainage facility, it is presented along with the reply from the concerned municipal commissioner. Problems faced by the public in obtaining essential commodities from fair price shops are taken to the concerned civil supplies officer and his replies together with information on remedial steps are presented to the listeners."

Though the picture drawn is rosy, the paper also says: "The norms of staff requirements on the programme side based on the total hours of transmission, normally practised, should undergo drastic rethinking when it concerns a local radio station. A major percentage of programmes originated by a local radio station is (*sic*) field-based. This requires extensive field work involving adequate infrastructural facilities." It would be more accurate to say that a major percentage of programmes originated by a local radio should be field-based. This is brought cut in a study of the Nagercoil experiment conducted in October 1985, after a year of its working. Carried out by the audience research wing of All India Radio, the study presents the following findings and suggestions:

(*i*) An analysis of the programmes over a period of three months showed that they were more or less on the same pattern as other stations, with the highest proportion being claimed by music film, devotional, light classical and folk.

(*ii*) Talks formed 57.1 per cent of the programmes for women, and 50 per cent of the Farm and Home programmes (which occupied only 4.1 per cent of broadcast time, presumably because no Farm Radio Officer was in position). The programmes for industrial workers consisted entirely of talks.

(*iii*) Almost all programmes were studio-recorded.

(*iv*) Manpower was insufficient and there were no OB recording facilities.

(*v*) The highest listening by radio owners (the other stations they could hear being Radio Sri Lanka, Tirunelveli and

Tiruchi) was between 6 a.m. and 8 a.m. and 8 p.m. to 10 p.m. The study recommended the introduction of a morning transmission also, and extension of the evening transmission till 10.30 p.m.

(*vi*) Officials of the development departments feared that they might be violating the code of conduct if they spoke frankly on radio. It was recommended that the Ministry of I & B should arrange for high-level clearance by the State government, of participation by officials.

(*viii*) Local news should be broadcast for a duration of 15 minutes daily. For this purpose there should be a news unit with a correspondent and a news editor.

(*i*) *Kota : a Foreign-Aided Exception*

An exception to the rule of AIR's local stations lacking the resources necessary for playing their expected role is Kota. This station has a Development Broadcasting Unit (DBU) which is funded, under a four-year project, by the Asia-Pacific Institute for Broadcast Development (AIBD) with its headquarters at Kuala Lumpur and the Ryerson International Development Centre, Canada. The resources available enable the production of researched participative and field-based programmes.

In contrast to the staffing pattern at the Nagercoil station, Kota's DBU alone has four programme executives. They visit the villages in the 50 km. radius covered by Kota station, talk to the people and ascertain their problems and interests. The 20 minute programmes are made with the collaboration of the villagers, and the language employed is the locally spoken Haroti—not standard Hindi (Rajasthan, where Kota is located, is classified as a 'Hindi—speaking State').

The weekly programmes of DBU began to be broadcast from 7 January 1988 at the peak listening time of 7.20 a.m., before the farmer leave for their fields. The series is under the title 'Nai Kiran' ('New Ray of Light'). Since a one-shot broadcast may be missed by several even among radio-owners, and since many may not possess a radio set, each programme is recorded on tape and the cassettes are supplied to the workers of the official development agencies as well as to voluntary workers and non-governmental organisations who express interest. They play the cassettes for groups of villagers at any time convenient.

Among the 38 DBU programmes broadcast from Kota station till the end of September 1988 are several which helped to bring about desirable change on the ground, among the rural communities in interaction with whom the programmes were made.

For example, the people of Naigon village were suffering from guinea worm infection. They attributed it to the water from hand pumps, and therefore switched over completely to using the village well. A DBU producer talked to the villagers as well as the doctors of the health department. It was found on inspection by a specialist that it was actually the well water in which the worms were breeding. This was explained to the villagers, and the well was scaled for disinfection. With treatment of the worm wounds organised by the health authorities, the village was soon relieved of the affliction.

Another DBU programme was aimed at promoting cleanliness in the village of Sorgia—to serve as a model for other neighbouring villages. Prizes were announced for a 'clean child' contest, and the prize-giving ceremony was followed by films and talks on hygiene and sanitation. Households were invited to participate next in a cleanliness contest, and the winners awarded prizes.

The objective of another programme, which took the final form of a community drama, was to encourage the enrolment of children in schools instead of utilising them as child labour. The expenditure incurred on the programme was nearly Rs. 10,000, but it had an impact on school enrolment.

An indicator of audience interest in these programmes is the large number of letters received by the Kota station from village listeners. Ms. Roberta Borg, the project coordinator who was interviewed in the course of this study, said that though the villagers are largely illiterate, they took the trouble to have their messages—stating a problem or requesting advice—written out for them by others. This was a measure of the interest evoked by the DBU programmes.

The experiment in development broadcasting at Kota should induce All India Radio to endow each local radio station with adequate resources, of personnel and finance. Particularly important is the example set by Kota of supplementing the broadcast of programmes promotive of rural development with audio-cassettes for utilisation in the non-broadcast mode. The problem of access to radio for the rural poor can be met best by a combination of the community listening facility with audio-cassettes for use by village level development workers, both in the official and the voluntary sector.

(*j*) *No Access for Rural Poor*

The study of one year of the Nagercoil station's working suffered from the defect common to most studies carried our by AIR's audience research wing, namely that it was confined to radio-owning homes. No attempt was made to ascertain what proportion of the population, rural and urban, has access to radio listening.

While the Nagercoil station broadcasts on medium wave, almost all the district-level radio stations proposed for the Eighth Plan will employ Frequency Modulation. This is because of the congestion of the medium wave spectrum. And FM radio receiving sets made in India now cost more than ten times the price of a MW transistor set. The rural poor will therefore have even less access to local radio than they now have to regional stations.

If middle and upper class listeners are alone going to be available for local stations, they will be different from the regional stations only to the extent that they offer opportunities to local singers and talkers drawn from the same privileged section of the population. The contribution of such 'local' radio stations to development can only be nominal.

Unless there is a policy decision to provide access to local radio for the rural poor, through a revival of the community listening facility as well as providing opportunity to them to voice their needs and views, the expenditure on setting up district-level stations will have no social justification. The so-called local stations may end up by having their spare transmission capacity utilised for relaying the National Channel.

(*k*) *Doordarshan: A Communication Aberration*

A variety of forces were at work in the 1950's to bring television to India. Businessmen, politicians in power, and civil servants who went abroad and saw television in the U.S.A. and elsewhere wanted to have similar entertainment at home. Multi-national corporations in the field of television saw in India a big potential market. UNESCO was interested too, dominated as its secretariat was by experts and officials from the industrialised and media-saturated countries of the west with their own ethno-centric notions of development and of communication. A committee formed by UNESCO came up with 'norms' by which to measure the sufficiency or insufficiency of mass communication facilities in developing countries. As an 'immediate target', the group recommended that every developing country should aim at providing for every 100 of its inhabitants ten copies of daily newspapers, five radio receivers, two cinema seats and two television receivers. This was a simplistic and quantitative approach. The 'UNESCO norms', as they came to be known, considered the mass media in terms of growth in their size and not the relevance of their content, or their accessibility, to the common people in developing countries. A commendable feature of the formula, however, was the one pertaining to daily newspaper copies, which implied vigorous efforts to promote literacy and purchasing power among the masses in the newly free and developing countries.

(*a*) *Educational Beginning*

Anyone looking at Doordarshan today will find it hard to believe that television was introduced in India in 1959 with an educational and developmental intent. Jawaharlal Nehru was Prime Minister at the time, and he would not have countenanced the expenditure of rupee and foreign exchange resources on introducing television as a medium primarily of entertainment as in the affluent countries. Television was therefore canvassed on the grounds of education and development.

A transmitter was offered for sale at a reduced price to the Government of India by Philips (India) after they had demonstrated the use of television at an industrial exhibition in New Delhi. It was decided to use it for an experimental service, to see what television could contribute to community development and to education. UNESCO made a grant of $ 20,000 for the purpose, and the U.S. government helped by providing some equipment.

The service from the experimental TV station at Delhi began on 15 September 1959, with a range of about 40 km. around the capital. Programmes of rural social education were telecast twice a week for about 180 teleclubs formed for viewing and discussing. UNESCO provided the funds for the community viewing sets as well as for a study in 1961 which indicated that the programmes had made some impact. A service for schools was started on an experimental basis in 1961 and was in 1965 made part of the curriculum of higher secondary schools run by the Delhi Administration.

It was in 1965—when Indira Gandhi was Minister of I & B in the Lal Bahadur Shastri Cabinet—that a daily service of one hour's duration, of general interest comprising entertainment and information for those who could afford to buy their own TV receiving sets was started. Since then television has been expanded as a means of Entertainment (much of it coarse) and Information (with the news part of it selective and angled), merely token obeisance being paid to Education and Development. The growth of the television system has been impressive, but only among the upper and middle classes and a section of the urban working class. It is not meant for, and does not reach, the country's poor.

(*b*) *Pluses and Minuses of SITE*

A late flicker of the educational and developmental impulse of Indian television was the agreement entered into by the government with the National Aeronautics and Space Administration of the U.S.A. for a Satellite Instructional Television Experiment (SITE). Before SITE became operational from 1 August 1975, terrestrial stations telecasting programmes of entertainment and information for the urban well to do had come up at Bombay, on 2 October 1972 in mocking commemoration of Gandhiji's birthday; at Amritsar on 29 September 1973 (to wean the affluent from viewing Pakistan's television programmes); and at Srinagar on 6 November 1973 (also as a counter to Pakistan TV).

In contrast to the terrestrial stations which had gone bourgeois in their orientation, SITE concerned itself not only with the production of rural-interest television programmes and their transmission, but also their wide-scale social consumption. Direct reception sets with 24 inch screens were installed in 2,330 villages in backward districts of six States with programmes in four languages: Oriya for Orissa; Hindi for the States of Bihar, Rajasthan and Madhya Pradesh; Telugu for Andhra Pradesh; and Kannada for Karnataka. SITE utilised ATS-6, which was made available and put into geostationary orbit by NASA. The Indian Space Research Organisation (ISRO) was responsible for all technical operations of the ground segment, including the maintenance of the direct reception sets. Doordarshan was responsible for the software.

There was a morning transmission of one and a half hours for school children, with programmes of 22½ minutes each in the four languages. The programmes covered science education, biographies of great Indians, health education, current affairs and entertainment. The evening transmission of two and a half hours was intended for the rural adult population (though children turned up in the evening too and accounted for well over a third of the audience). It carried news; entertainment programmes, many of which served also to portray the unity underlying India's cultural diversity; and instructional programmes on agricultural improvement, animal husbandry, health, hygiene and nutrition, and family planning. A news bulletins formed part of a half-hour 'national segments' in Hindi, which was telecast in all the six districts.

While the experiment was an unqualified success in terms of hardware and technical operations, SITE was only a qualified success as an exercise in social education for the rural population. Software presented a more varied and continuous challenge during SITE than the installation and operation of hardware. The main reason for the limited social impact of SITE was that there were only three Base Production Centres (BPCs) to make the bulk of the programmes for villages with varied agro-economic and cultural backgrounds, many of them more than a thousand kilometres apart. Area-specific programmes were therefore minimal. And it is a truth apparent to common sense that decentralised and area-specific programmes, employing local speech and depicting the local agro-economic and human landscape, are necessary in any attempt to persuade people to change their attitudes and practices, whether in agriculture and hygiene or—and even more so—in family planning.

(c) *Lost Lesson of Pij*

The common sense view on the need for area-specificity and the employment of local speech in development communication has been borne out by the findings of a research study undertaken by ISRO. It entailed holistic studies by anthropologists in seven villages: one each in the six clusters served by the satellite and, in addition, one village—Dadusar—served by a terrestrial transmitter at Pij in the Kheda district of Gujarat. The Pij experiment was undertaken by a group of socially concerned space scientists of ISRO. The transmission comprised the half-hour national programme of SITE in Hindi, telecast through rediffusion, and a half-hour Gujarati programme prepared at Ahmedabad under the auspices of ISRO. In several of these Gujarati programmes, the Charautari dialect prevalent in Kheda district, instead of standard middle-class Gujarati, was employed. The programmes themselves were research-based, and dealt with the felt needs and interests of the audience. About 500 community viewing sets were installed in 355 villages of Kheda district. Several villages thus had more than one set. This was a densification of viewing perhaps higher than even in Kashmir Valley—the other island of television relevant and accessible to the rural population.

The social anthropologists who lived for about a year and a half in the seven villages, for data collection and continuous observation, found:

> "The linguistic profile of these villages shows a higher use of dialects than the standard language of the region... None of the languages spoken in the villages were used on TV except in Dadusar where Charautari was utilised to some extent. Furthermore, the use of English-sounding technical names (in programmes on agriculture and animal husbandry) compounded the problem... If the programmes were entertaining enough in terms of songs and dances, language did not become a barrier. Due to this reason, recreational programmes of other clusters were viewed with enthusiasm in all the villages... The Hindi common news was almost ineffective in all villages. The problem of lip synchronisation affected the credibility of the TV medium to an extent (in Andhra Pradesh and Karnataka which used one video and two audio channels.)"

In other words, the most effective communication during the Satellite Instructional Television Experiment was achieved not via satellite but through a low-power, local, terrestrial station which interacted with the community round it and dealt with local problems in local speech.

The need for communication to be localised and participatory if it is to play a developmental role was realised by the more perceptive among Western scholars of communication like Wilbur Schramm. He was the leader of a team of experts who were invited by the Indian Government in 1963 to advise on the development of information infrastructure. It was on the recommendation of this team that the Indian Institute of Mass Communication was established in New Delhi in August 1965. On a visit to the Institute in 1977, Wilbur Schramm said in the course of a remarkably candid address to the faculty and students:

> "There is a confession that I have to make. It is about the book that I published, Mass Media and National Development, in 1964. Actually it was written in 1962. I want to confess now some of the things I did not see then, some of the things I would do differently today if I were to write this book all over again.
>
> "Number one: the concept of what mass communications can accomplish by the themselves has been almost completely revised. The bullet theory, that you can shoot a message into a person and he falls over, that it has a predominant effect, died simply because it was found that people did not fall over. They would brush away some of these information bullets; they would catch it in their hand, or eat it like chocolate candy. This was not like an electric current flowing through a wire on any thing like that. The receiver was an active as the sender. That is, we got away from the idea that the audience was passive, and we got away from the idea that we could do things with him by putting some information into him without doing anything else.
>
> "Secondly, the trickle-down theory. The idea of trickle-down development is something of which I would be less proud now than in my book in 1962. But that was how the pattern looked in 1962, when the great experts in the capital city, the government, the universities would go on radio or the television and talk to the village people about how to be healthier, more prosperous or how to have small families. Well, it simply does not look any more that way. What we have found out in these last 15 years, rather painfully, is that important as communication from top to bottom is, more important is communication at the bottom—that is, communication between the people at the same level.
>
> "Activity at the village level is the only means, I would say, of effective village change and whereas communication has to travel down, it has got to travel up and, much more important, it has got to travel round at the village level. People have to work together and discuss together, they have got to make their changes together. Only when communication can build itself into the social structure, is it going to show any real hope of extensive results. Only when media channels can mix with inter-personal channels, and with the organisation in the village, are you going to have the kind of development that you will like. In other words, the idea of big media, of talk-down communication, is something which is not going to work."

The Indian Government did not listen to the older and wiser Schramm. Had the SITE experience been properly analysed and understood, it would have pointed to the conclusion that television to be effective in a developmental role would have to be localised and the community would have to be provided with access; that district-level television is much too expensive in the circumstances of India; and that local radio continued to be the best option for developmental mass communication in the broadcast mode (as distinct from audio or video-cassettes).

Instead, more Doordarshan Kendras were opened in the cities to cater for the urban middle and upper classes for whom television is basically a one-time, wholesale investment in film entertainment; it obviates the need to travel to cinema halls and queue up for buying tickets. Lured by the entertainment it offers, large numbers of the urban working class, too, are acquiring a television set whether or not they can truly afford it in the context of other needs like health care and children's education.

The four pre-SITE TV centres were followed by Kendras at Calcutta (August 1975); Madras (August 1975); Lucknow (November 1975); Jaipur (March 1977); Bangalore (November 1981); Trivandrum (November 1982); Guwahati (November 1982); and Ahmedabad (November 1983). In addition to these twelve centres, there are six more that are usually listed separately because they have the distinction of making some programmes of rural interest and social education on the SITE pattern. The centres are at Hyderabad (Andhra Pradesh), Nagpur (Maharashtra), Cuttack (Orissa), Ranchi (Bihar), Gorakhpur (Uttar Pradesh), and Rajkot (Gujarat). The programmes prepared in the respective languages are of the duration of about half-an-hour per day. They are brought to Delhi and uplinked to INSAT on a time-sharing basis for community viewing by rural audiences. But the size of the rural population thus served is very small. The total number of community viewing sets throughout the country—located in schools, panchayat ghars and elsewhere—as of June 1988 was a mere 30,834. The distribution was as follows:

Community TV Sets

State/Centre	*Number*
Andhra Pradesh	930
Bihar	993
Delhi	1,074

(*Contd.*)

State/Centre	*Number*
Gujarat	4,503
Madhya Pradesh	412
Maharashtra	6,919
Orissa	694
Punjab	514
Rajasthan	1,799
Uttar Pradesh	4,064
Calcutta	309
Madras	8,042
Srinagar	581
Total	30,834

(*d*) *Asian Games and Delhi-Centrism*

The introduction of television in Indonesia was on the occasion of the Fourth Asian Games which opened at Jakarta in August 1962. In India, the Ninth Asian Games held in New Delhi marked the introduction of the more expensive mode of programme-making and transmission in colour.

Mehra Masani recalls: "In Iran, the Shah introduction colour TV to cover the coronation of Empress Farah. In Uganda, Idi Amin brought in colour TV at a cost of $6 million to cover a meeting of the Organisation of African Unity and also to cover his most recent wedding in 1975. In Thailand it was introduced in a great hurry to cover a beauty competition. We, not to be outdone, started on colour TV in a hurry to relay the Asian Games."

Two dozen low power relay transmitters were imported from the U.S.A. This took to more than 40 the total number of transmitters, including those which were relaying the regional Kendras then in operation. Software presented no problem during the course of Asiad, from 19 November to 4 December 1982. Performing talent did not have to be spotted, trained and rehearsed by Doordarshan's producers. The performers were there, fully trained. And the language of their performing art was the universal language of body movement, obviating the need for dubbing or sub-titling. The camera had only to be focussed properly on the performers.

The software situation would be different after Asiad. This might have been among the reasons for the Government of India deciding on 6 December 1982 to appoint a Working Group "to prepare a software plan for Doordarshan, taking into consideration the main objectives of television of assisting in the process of social and economic development in the country and to act as an effective medium for providing information, education and entertainment." Dr. P.C. Joshi of the Institute of Economic Growth, Delhi, was the chairman of the Working Group and the present writer was among its members.

The Working Group was agreed in its approach to Doordarshan's programmes promotive of national integration that they should be national in content but local in language. A paper on the 'Uses and Dangers of Networking', considered and broadly endorsed by the Group, said:

"Networking via satellite can be an aid to programmes conducive to national integration. This communication technology can also be counter-productive if unimaginatively used.

"Occasions like the Republic Day parade in the capital, or the Independence Day rally at Red Fort, are visually spectacular and it is a heartwarming experience for people in widely separated parts of the country to be able to view them simultaneously. However, even the impact of the Republic Day parade shown on television will be enhanced if the commentary from Delhi, in Hindi or English, is overlaid from time to time with translation in the local language.

"The prevailing concept of a 'national programme' is to put together a number of regional programmes which are largely unintelligible to viewers outside the region concerned. A recent example is the presentation of 'Pinnal Kolattam' on 4 November (Diwali Day) 1983. The words of the song sung by the women while performing this traditional Tamil dance conveyed fine humanistic sentiments—but only to those who know, Tamil; to the rest of the viewers in the country, the words were gibberish, Discreet, unobtrusive and brief sound overlays, to explain the words of the Tamil song in the other Indian languages, would have enabled intelligent appreciation of the programme instead of its appealing only to the eye."

Even as the Working Group was discussing suggestions on these lines, including the overriding need for area specificity in programmes that seek to promote development, the government announced a Special Plan for TV expansion by setting up more low power transmitters to relay programmes from Delhi. This seemed to pre-empt the Working Group's formulation of a software plan and to render it redundant. However, the Group did not despair but presented its recommendations in a report notable for its plain speaking. Here are some extracts:

"No wonder that a member of our Group has characterised the Special Plan for TV expansion, to take the Delhi Kendra's programmes of meretricious entertainment and government publicity to the middle and upper classes all over urban India as the greatest communication aberration in the history of the Third World. Given the disparity in access, and the lack of relevance of the software of Doordarshan to the harsh living conditions of the common people, it seems ironical that television should be claimed—as it has been by a widely quoted American writer—as a medium which retribalises humankind… If Doordarshan, with its foreign social comedy serials and Indian feature films projecting the aping of Western life styles, is promoting a process of universal tribalisation, it is by inducting sons and daughters of TV viewers and the moneyed Indian upper crust comprising businessmen and politicians, civil servants and academics, and every other category of the privileged into the international fraternity of rock and roll, jive and disco. The international elite of the developed and developing countries do indeed constitute one tribe irrespective of their skin colour and geographical location.

"In order to correct the aberration of Delhi-centrism, and to restore Doordarshan's original purpose of promoting social education and development, we recommend that each transmitter of Doordarshan's network should be provided with the facility of making and telecasting locally originated programmes, as well as programmes from the nearest major Kendra in the linguistic region (either obtained on video-tape or at a later stage by relay through microwave or satellite), besides relaying programmes from Delhi.

"Implementation of this recommendation will help to transform a forest of relay transmitters into a large complex of TV Kendras that are required in a vast and linguistically diverse country· to provide programmes of national, regional and local interest…

"If the locally comprehensible telecast of national integrative programmes should lead to a diminution in the telecast time occupied by the 'National' programme it need not cause any concern. On the contrary, those who make Doordarshan's policy should be happy if a nationally integrative programme fulfils its objective more effectively by employing local speech. This understanding implies an acceptance of the proposition that vision has not abolished the need for words, that the eye has not rendered the mind redundant.

"Even para-dubbing will be of limited assistance to those among rural viewers who are familiar only with the local dialectal form of an Indian language. We have therefore suggested that, at community viewing centres, the custodian should further promote comprehension by furnishing explanation in the local dialect."

Far from acting on the recommendations of the Working Group, the government has been expanding the number of relay transmitters linked exclusively with Delhi. They numbered 195 as on 31 December 1988. On the other hand, not one new programme production centre had been commissioned after the last of the 18 Kendras listed earlier, in section (*ii*) (*c*), came up at Cuttack on 11 March 1985. The Seventh Five Year Plan had provided for 30 centres, additional to the 18, to be equipped with studio facilities. In a written reply to a question in the Rajya Sabha on 29 July 1988, the Minister of Information and Broadcasting, H.K.L. Bhagat, listed the thirty centres: Agartala, Aizawl, Allahabad, Bareilly, Bhopal, Bhubaneswar, Chandigarh, Daltonganj, Dibrugarh, Gangtok, Gulbarga, Capital of Haryana, Imphal, Itanagar, Jammu, Kohima, Madurai, Muzaffarpur, Panaji, Patna, Pondicherry, Port Blair, Pune, Raipur, Shillong, Shimla, Silchar, Siliguri, Tura and Vijayawada. The achievement was zero at the end of August 1989.

(*ii*) *Advertising : Political and Commercial*

The reason for hardware racing ahead of software is that the pretence of Doordarshan serving to promote broad-based development has been dropped. Along with radio it is being utilised unabashedly as an instrument of political advertising of the party in power at the Centre and in particular of the Prime Minister, and of commercial advertising. The latter helps to augment the resources available to the government to expand the Delhi-centre TV network as an instrument for political image-building.

The misuse of Doordarshan is more blatant than of All India Radio because television is the more potent medium.

(*i*) Media Units should give effective coverage to government's programmes, policies and achievements.

Particular attention should be given to programmes and dissemination of information relating to developmental activities in all their facets including, for example, extension work in Agriculture, Education, Health and Family Welfare and Science and Technology.

(*ii*) Media Units should devise and present suitable programmes relating to youth, including information regarding opportunities for and generation of employment in various fields.

(*iii*) Vigorous steps should be taken by the official media units to serve the rural population, minority communities, women, children, illiterates as well as other weaker and vulnerable sections of the society.

(*iv*) Each media unit should try to encourage both individual as well as collective effort by the handicapped such as blind, deaf, dumb and other disabled persons as well as institutions doing service to this section of society. Media Units should also try to propagate the good work that is being done to eradicate social evils such as untouchability, narrow parochial attitudes and loyalties, inequalities and exploitation. Steps taken by the government in this regard should be highlighted.

(*v*) Dissemination of information, news and comments in Akashvani and Doordarshan and Films Division should be done in a fair, objective and balanced manner including contrasting points of view, with emphasis on events and developments. Reference to personalities may be made primarily for providing human interest.

(*vi*) Media Units should adopt a professional approach in their activities. They should strive for creating audience interest and to meet their needs and expectations by talking about what is on the ground, having stories of local interest in a realistic manner by adopting actual field-based coverage. The Media Units should, instead of limiting themselves mostly to what the government is planning to do, identify and highlight successful examples of group and individual efforts in developmental activities and towards solutions of local problems. Problems and issues should also be covered from the public point of view without any hesitation in bringing out healthy criticism.

(*vii*) Media Units, and particularly Akashvani and Doordarshan, should endeavour to put out news and features which are investigative and in depth. There should be a greater attempt in diversification of coverage in terms of personalities being brought in for participation, places of origination of news, and sources being relied upon.

(*viii*) Media Units should have a constant dialogue among themselves and establish effective horizontal linkages to support and supplement one another's programme and resources.

(*ix*) Each media unit should have adequate systems for continuous evaluation and re-assessment of its performance in the context of its specific objectives, resources and schedules."

The hope of the official media being given a credible and constructive role to play in the total flow of communication in the country was strengthened when, on 28 November 1980 the Ministry of Information and Broadcasting constituted a Media Advisory Committee "to advise on various matters relating to policies and programmes relating to the media units under its administrative control." Chairman of the Committee was G. Parthasarathi, former journalist, diplomat and educationist. The members included distinguished practitioners of communication in the widest sense in the non-official sector, as well as some with experience of work in the governmental media. They were:

E. Elkazi, Mulk Raj Anand, Basu Bhattachaya, E.V. Chitnis, N.L. Chowla, K.S. Duggal, B.V. Karanth, P.V. Krishnamurthy, K. Kurian, V.K. Narayana Menon, Sumati Mutatkar, N. Bhaskara Rao, and Fatima Zakaria.

The terms of reference were wide. The Committee was to advise the government on:

(*a*) Structural changes in the different media organisation under the Ministry of I & B, and if necessary, in the Ministry itself to bring about greater professional efficiency and improvement in the quality of performance of the media in response to wide-ranging national requirements and aspirations.

(*b*) Measures to be taken at the national, state, regional and local levels to associate the people more directly in the planning and initiation of innovative programmes in the different media organisations under the jurisdiction of the Ministry of I & B, through creative participation and inter-communication so as to enrich their cultural identity and promote national integration.

(*c*) Determining priorities in different areas of media development and providing adequate infrastructural support and strengthening the capacity of the media to reach out to all sections of the people.

(*d*) The mode and mechanics of coordination amongst various media groups under the Ministry of I&B and of cooperation between the Central and State media organisations with a view to maximising the impact of communication support for development efforts.

This exemplary statement of news policy for the broadcast media was cited and warmly commended by the Working Group on Doordarshan in the report it gave early in 1984. The Working Group said: "Like the letter incorporating Policy Guidelines, the statement of news policy is informed by an enlightened and liberal approach which acknowledges the need for programmes of news and current affairs in the government-run electronic media, in a developing and democratic country, to reflect the progress and problems of the country's development and the diversity of political opinion."

Soon, however, the hopes raised by the issue of the Policy Guidelines and the formation of the Media Advisory Committee were frustrated. Misuse of the official media in the post-Nehru years has been in direct proportion to the degree of acrimony in public life. Mishandling of problems in Assam and Punjab led to a revival of the politics of confrontation and violence-prone agitation, and with it the misuse of the official media. When the Punjab crisis culminated in the assassination of Indira Gandhi on 31 October 1984, Doordarshan's prolonged display of the slain Prime Minister's body on the television screen made its own contribution to the fury let loose on Sikhs in Delhi during the ensuing days by anti-social elements. The hopes created by the conciliatory policy of accords pursued in the beginning by the new government headed by Rajiv Gandhi also proved short-lived. With the exist of V.P. Singh from the government on the issue of kick-backs received by Indians on Defence purchases from abroad, the ferocity and bitterness of political controversy attained new dimensions—and with it the manipulation of the electronic media.

The Former Minister of Information and Broadcasting, H.K.L. Bhagat, had the effrontery to claim repeatedly that All India Radio and Doordarshan were adhering to the guidelines formulated by the Media Advisory Committee. The Committee itself is a hibernation, not having held a meeting for years. Misuse of the official media is among the issues which the non-Congress parties, under-represented in Parliament over the years on account of our electoral system, have taken to the streets. This has resulted in the use of police force, and disruption of normal life which is detrimental to the development process.

(*i*) *Meretricious Entertainment*

Both political and commercial advertising aim at maximising audience size. The megalomania of the politician in power coincides with the commercial advertiser's lusting after expansion of the market for his product or service. Both want maximum exposure. Neither has qualms about the means employed for achieving it. They do not hesitate to appeal to the lowest denominator of popular taste in order to attract listeners and viewers. The mutually reinforcing combination of political and commercial advertising accounts for the vulgarisation of much of the entertainment offered by Doordarshan and of the advertisements carried by it.

Commenting on the heavy reliance of Doordarshan on the screeing of films and film-based programmes, the report of the Working Group on Doordarshan Software said:

> "Even worse than the third-rate feature films screened in full are the compilations from such films, many of which are a concentrated offering of love duets accompanied by obscene gestures and scenes of imbecile hero chasing imbecile heroine round bushes or down a city street, teasing and harassing and finally winning her. The compilers of Chitrahaar and similar song and dance sequences appear to think that it promotes national integration if they show, from different regions of India, a man and woman rolling over each other down a grassy slope, of allegedly 'folk' dancers swinging hip and bosom.
>
> "Unlike a pornographic book or journal read in privacy by an individual, or a lewd or sadistic film viewed by a person in the anonymity of the crowd in a darkened cinema hall, a film screened on television is often watched by three generations of a family. To watch these lewd scenes in a family group is highly embarrassing. It is unfortunate that most of the feature films and song and dance sequences telecast by Doordarshan reduce to repulsive public

exhibition so private and precious an experience as the man-woman relationship. The objection is to vulgarity, and not to so-called permissiveness which has always existed in every society and entails relationships not sanctioned by a society's mores, specially the mores of the middle class which tends to be more prudish and hypocritical compared to working people or the very rich."

Nothing daunted, Doordarshan has gone on to offer its viewers more of the same fare. The Working Group's advice against sexist advertising has been similarly disregarded. The Working Group quoted with approval the remarks made on the subject by the Second Press Commission (on p. 22 of its report). Noting that there had been an increasing tendency to exploit sex appeal, the Press Commission had said: "The exploitation of the female form in commercial advertising promotes the notion of women as sex objects and runs contrary to the news items and articles which many newspapers carry in support of treating women as equals and respecting their personality as individuals endowed with as much human worth as males. It is a pity that all the rhetoric in the country during and since the observance of 1975 as International Women's Year has had so little effect on advertisers and advertising agencies, and for that matter on editors and publishers." The Working Group commented wryly; "And, we may add, on those who direct Doordarshan at the level of the Kendra, the Directorate-General and the government."

(*ii*) *Stoking the Fires of Consumerism*

Besides vulgarising popular taste, Doordarshan is through its advertising promoting the self-regarding culture of consumerism. This culture desensitises the privileged members of the middle and upper classes to the mass poverty round them. It is antithetical to the socialism which was written into the Preamble of the Constitution in 1976 and which all political parties are now compelled to pay allegiance to—even if as hypocritically as the Congress (I).

Following are some quotations from Indira Gandhi on the adverse ethical consequences of promoting consumerism. Addressing a joint conference of officers of the Central Bureau of Investigation and of State anti-corruption agencies in New Delhi on 23 March 1981, she named the promotion of consumerism by the mass media first among the factors making for corruption: "The constant emphasis of the media on material goods, the vision of the comforts enjoyed in advanced societies, proliferation of regulations, the pressure of inflation, the breakdown of religious and ethical constraints, a general rise in permissiveness—all these contribute to increase in corruption."

In the course of the Raul Prebisch Lecture at Belgrade on 31 June 1983, Indira Gandhi spoke of the continuance of colonial education systems perpetuating the psychology of imitation, and said: "Educated persons view progress and development in terms of the level of goods and services they can command, and not he inherent self-reliant strength generated in the economy. Transnational advertising arouses new desires which distort economic priorities and lures people into artificial consumption patterns." Domestic advertising does the same.

Returning to the theme during her address to the United Nations General Assembly in New York on 28 September 1983, Indira Gandhi said: "In this age of instant globe-encircling information technology, the media dazzle eyes, and fill cars, with images and reports of affluence. Even the modest expectations of our peoples are far beyond our present means."

Unfortunately there was a mismatch between these perceptions of Indira Gandhi and her practice. It was during her Prime Ministership that TV commercials were inaugurated on 1 January 1976. Over the years, advertising has become a money-spinner as will be evident from the following figures:

Revenue from Doordarshan's Commercial Service

Year	*(Gross, in Rs. crores)*
1976-77	.77
1977-78	2.07
1978-79	4.97
1979-80	6.16
1980-81	8.08
1981-82	11.27
1982-83	15.89
1983-84	19.79
1984-85	31.43
1985-86	60.20
1986-87	98.31
1987-88	136.00
1988-89 (up to July)	54.14

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Even in the case of the Press, which does not have its hand in the taxpayers' pocket and must pay its way through circulation and advertising revenue, the Second Press Commission had observed; "It was recognised that classified advertisements relating to employment, matrimony, housing and the like serve a useful function but a considerable part of display advertising was prodigal... The glossy magazines and the glossiest of advertisements in the Press—of jeans and soft drinks, cigarettes and cosmetics, air travel or entertainment in five-star hotels (not a few of them in the public sector)—are directed at the newly affluent and their children. We are of the view that the Press must address itself to the question of what contribution it is making to the strengthening of the moral fabric of society, and discouragement of the trend towards conspicuous and excessive consumption which a developing country can ill afford."

Citing these remarks with approval, the Working Group on Doordarshan Software said: "If privately published newspapers should address themselves to the propriety of promoting consumerism in a developing country, surely Doordarshan which is subsidised by the taxpayers (including the millions who pay excise duties on matches, bidies and kerosene but have no access to television) also should... The social effects of commercials have to be considered. The advertising on Doordarshan is overwhelmingly of consumer goods and services which should, in the Indian context, be classified as luxuries."

Instead of Doordarshan relying less on advertisement revenue and more on licence fees on TV receiving sets, the opposite has been the case. While the price of the poor man's post-card has been trebled over the years, the annual licence fee for a television set remained unchanged at Rs. 50 and was altogether abolished soon after the Working Group turned in its report. It is noteworthy that among the reliefs announced by the Union Finance Minister on 27 April 1989, in the higher imposts proposed in the Budget for 1989-90, were those relating to excise duties on TV receiving sets.

Whatever the moral cost to society, the purpose both of the political and commercial advertisers has been served by the entertainment and advertising policies pursued by Doordarshan. The number of TV receivers in the country rose from 6,76,615 licensed sets in 1977 to an estimated 132,56,000 in 1987. The level of increasing demand can be inferred from the following figures of the production of TV receiving sets in the country as estimated by the Department of Electronics:

(*figures in millions*)

	1986	*1987*	*1988*
B & W	2.15	3.20	4.40
Colour	0.85	1.10	1.30
Total	3.00	4.30	5.70

(*iii*) *Sustained Plea for Autonomy*

Requisite for the utilisation of the publicly owned electronic media for broad-based development is their liberation from direct and day-to-day control by the Minister of Information and Broadcasting and his or her official-minions. Equally necessary is the decentralisation of their operations so that they can become locally relevant and serviceable.

Advocacy of autonomy for the official media has a long history. It dates from the report given in April 1966 by a Committee on Broadcasting and Information Media, popularly known as the Chanda Committee. This committee was appointed when Indira Gandhi was Minister of Information & Broadcasting in the government headed by Lal Bahadur Shastri.

In those days of innocence, when political life had not become fiercely acrimonious, autonomy was advocated by the Chanda Committee on grounds of free play for creativity rather than of insulating radio and television and short films from misuse for partisan political purposes.

"It is not possible in the Indian context," the Chanda Committee's report said, "for a creative medium like broadcasting to flourish under a regime of departmental rules and regulations. It is only by an institutional change that AIR can be liberated from the present rigid financial and administrative procedures of government." The Committee accordingly recommended the constitution of separate corporations for Akashvani and for Doordarshan, with the freedom to evolve their own methods of recruitment, scales of pay and conditions of service according to needs, and to devise a financial and accounting system appropriate to their creative activity.

The Cabinet considered this recommendation in December 1969. The date is significant. It was after the split in the Congress

Party from which Indira Gandhi emerged as leader, on a populist plank, of the majority faction. The government informed the Lok Sabha in April. 1970 that "it was agreed that the present is not an opportune time to consider the conversion of the All India Radio into an autonomous corporation."

Came 1975 and the emergency. The All India Radio Code, formulated in 1967 and amended in March 1970, on both occasions with the Cabinet's approval, was scrapped—without the matter going to the Cabinet. The Code said, inter alia, that broadcasts on All India Radio would not permit "attack on a political party by name" or "hostile criticism of any State." The scrapping of the Code was decided at a meeting taken by the Minister of Information & Broadcasting, V.C. Shulda, who said that if the Prime Minister approved the action, it would not be necessary to go to the Cabinet. The Prime Minister noted on 4 May 1976: "The guidelines given to the broadcasters are now obsolete. Hence the Code should lapse. But I do not think that it is necessary to formally inform Parliament." Thus, though the Code had earlier been placed before parliament, the matter did not go either to the Cabinet or to Parliament. This is recalled in the White Paper on Misuse of the Mass Media.

Voted to power in a surge of popular revulsion against the excesses committed by the authorities during the emergency, the Janata Party could have decided straightway to implement the recommendation of the Chanda Committee to liberate the publicly owned media from departmental control. L.K. Advani, who was Minister of Information & Broadcasting in the Janata government headed by Morarji Desai, has acknowledged that it was a mistake to have appointed another committee, with George Verghese as chairman—the Working Group on Autonomy for Akashvani and Doordarshan—instead of acting on the Chanda Committee's recommendation.

To the credit of the Verghese Group, it completed its work most expeditiously. Appointed on 17 August 1977, the Working Group turned in its unanimous report in February 1978. In addition to statutory autonomy for All India Radio, the Verghese Group envisaged the licensing, by the proposed National Broadcast Trust, of certain non-governmental institutions to set up local low-power stations: "In the first instance we would recommend that such broadcast franchise be limited to educational institutions, whether these be universities and colleges, Indian Institutes of Technology, agricultural universities and research stations, medical colleges, or other approved institutions which have an educational, extension or cultural orientation."

The Verghese Group did not stop with recommending a line of action. It gave the government the draft of the legislation necessary for giving effect to its recommendations, in the form of an Akash Bharati Bill, 1978, complete with a Statement of Objects and reasons and a Financial Memorandum and a Memorandum regarding Delegated Legislation. Such workman like performance is rare on the part of committees formed by the government. However, following the break-up of the Janata Party, the Congress (Indira) was voted back to power and the Verghese Report was ignored.

Against this background, the Working Group on Software for Doordarshan did not repeat the plea for statutory autonomy. It suggested a restructuring of the I & B Ministry's secretariat to enable the Minister to receive policy advice from communication professionals rather than general administrators, and the formation of a National Doordarshan Council as a guardian of Doordarshan's functional and professional autonomy.

The first suggestion was put forward in the chapter on Information, in these words:

> "The I&B Ministry is structured on conventional lines with its officers 'dealing with' attached offices such as Doordarshan. The senior officers of the Ministry are drawn mostly from the Indian Administrative Service and allied services. They keep moving from one Central Ministry to another, or between the Centre, States and public undertakings. The year 1983 saw the exit of all three of the I&B Ministry's senior officers dealing with Doordarshan before completing even two years in the Ministry: The Secretary, who came from chairmanship of the Madhya Pradesh State Electricity Board and left to become Secretary of the Coal Department; Joint Secretary (Broadcasting), who was earlier Commissioner of a Division in Maharashtra and returned to that State as Managing Director of the State Finance Corporation; and Deputy Secretary (TV), who also came from district administration and left for a training course abroad. It is hardly to be expected that the problems of Doordarshan and its news wing can be appreciated and resolved by such birds of passage."

"Senior officials of a Ministry are expected to tender policy advice to the Minister, who in a democracy like ours is necessarily a generalist with a tenure of uncertain duration depending on the vicissitudes of politics and elections. We do not regard it as a satisfactory arrangement in a sensitive Ministry like I & B that the Minister should have to rely for policy advice on other generalists who serve in the ministry for brief periods.

"This is also the view of the Second Press Commission which submitted its report in April 1982. It noted that the running of the Central Information Service by the Ministry of I & B has not been satisfactory. Recruitment to the two levels of direct entry into the Service was held in abeyance for nearly ten years during which a reorganisation of the Service was 'under consideration' in the Ministry.

"We endorse the recommendation of the Second Press Commission that the Ministry of I & B should be restructured on the lines of the Railway Board, with an Information Board comprising professional heads of media units, including Doordarshan, to tender policy advice to the Minister and with the secretariat of the Ministry attending only to financial and administrative matters."

The National Doordarshan Council envisaged by the Software Group was to include, among others, six to eight non-officials with an outstanding record of knowledge and experience in one or more of the areas of formal and non-formal education, the arts and literature, news and current affairs, conscientisation and mobilisation of women, agriculture and rural development, industry, science and technology, the organising of self-employed producers and workers in agriculture and industry, communication research and advertising, and sports. Three roles were seen for the Council, which was to meet at least each quarter under the presidentship of the Minister of I & B: "(*i*) as a body that reviews and guides the organisation's performance; (*ii*) as a guardian of Doordarshan's functional and professional autonomy; and (*iii*) as a counterpart of the Press Council for examining complaints of inaccuracy or bias in the reporting of news and comment on current affairs."

2

Radio, Radio-News, Radio-Commentary and Other Features: Process and Benefits

RADIO ADVENT IN INDIA

The discovery of radio added a huge dimension to the state of mass communication. Simultaneous broadcasting of the spoken and taped word and music to millions of people in far flung places became a reality and a single big step in the direction of evolving a global village. Because of its radiation potentiality it also helps to rush news to people on the move as also to distant audiences.

Reinforced by powerful transmitters on land and satellites in the sky, and availability of cheap sets or transmitters and cassettes operating as instruments of field and feedback communication, the radio has become the principal medium of mass communication, entertainment and distant education in developing countries. As a comparatively low cost spoken word medium, it has cut across the barriers of illiteracy. In the third world radio is being used signally where TV is not fully developed as the premier means of extension, education and entertainment. This portable box has become a constant companion for farmers, workers, travellers and sports lovers and for all those who are interested in news, music, drama or quiz programmes, farm bulletins or views of eminent persons on public affairs. Because of its low cost and easy availability, it is a common mans paradise and for poor people a symbol of social respectability as well.

Historically, radio is the result of many researches. In 1895, Marconi perfected wireless telegraphy, working on principles developed over the preceding decades. Twelve years later. Lee De Forest in USA invented the vacuum tube which made sustained radio transmission possible. Wireless telegraphy and the radio telephone made rapid strides in maritime and other uses and received great impetus as a means of military communication and propaganda during the First World War.

Wireless transmission of verbal messages alone however did not constitute radio broadcasting. It lacked music, an element which was lent by the construction of a radio music box by the Radio Corporation of America in 1916. With the package of these inventions, the word radio thereafter came to mean the sending of words, sound and music through the air by the radiation of electromagnetic waves. With the coming of TV it came to mean in contrast, simple sound broadcasting, as distinct from the broadcasting of pictures. Combined, these two media are known as the electronic media—the principal channels of mass communication in advanced countries as also in developing countries.

It was not until a few years after World War I that the world properly entered the broadcast era. The first regular broadcasting station was set up in Pittsburg in 1920 in USA, followed closely by transmissions by the Radio Corporation of America. Two years later, the well-known British Broadcasting Corporation (BBC) came into being.

Beginning in India

Although India was a dependency, she was among the earliest countries in the world to adopt broadcasting. Its manifestation was first in the form of an experimental broadcast of a special programme of music put out by the Bombay office of the *Times of India* in collaboration with the posts and Telegraphs Department on 1 August 1921. Then commenced the phase initiated by the radio clubs of Bombay and Calcutta and by YMCA at Lahore. This type of ad hoc broadcasting, however, lasted only up to 1927. Financial difficulties came in the way. Ultimately, on the request of these clubs, a new mode of broadcasting ensued in the form of a regular service initiated by the Indian Broadcasting Company Limited, a private concern. Even this venture couldn't last long and the Company went into liquidation in 1929 despite the fact that 7,775 licences were in force and the radio stations especially of Bombay and Calcutta were functioning effectively. The Inchcape Committee suggested the closure of broadcasting but the government under the pressure of public and trade first agreed to continue the service and then took over in 1930 to continue broadcasting under the Indian State Broadcasting Service. In addition to Bombay and Calcutta stations which already existed, a third station was commissioned at Delhi. Encouraged by the experiment, the government decided to place broadcasting on a permanent footing in 1935. Mr. Lionel Fielder from BBC was appointed as the first Controller of Broadcasting. In 1936, the service was redesignated as All India Radio (AIR). Since then broadcasting made rapid strides and the number of licenses rose from 10,872 in 1933 to 92,782 in 1939, when World War II broke out.

Initially placed under the department of Industries and Labour and later transferred to the Department of Communication, the administration of broadcasting was ultimately entrusted to the Department of Information and Broadcasting in 1941. Two years later AIR's headquarters moved to the beautiful building constructed at Parliament Street, New Delhi in 1934.

Notwithstanding many potentialities of medium AIR, during the early period of its history, operated essentially for entertainment. In that respect, the programmes of Bombay and Calcutta stations had a cultural learning and were qualitatively good. These programmes attracted some of the best talents. But without acoustics, the programming was more one of trial and error, though in the process the staff gained a lot of professional experience. In the Bombay station good programmes of dramas and Western and Indian music were tried. In course of time, the programmes were further diversified by the addition of school broadcasts and rural programmes. Reading from good literature had already come in vogue. In 1935, the broadcast of time signals was introduced and in the following year the famous Colaba pip.

War Publicity Arm

With the breaking out of World War II, AIR had to bear a huge burden of the war publicity. AIR was recognised as a vital source of news and views, covering events at home and abroad. This made the government set up additional transmitters including 200 shortwave transmitters, probably the first of their kind in this part of the world. The significant aspect of development programmes included the organisation of its second unit of broadcasting—the External Services—and the expansion of the news services and transmission hours. As a result a wide variety of programmes like talks and features were introduced. Centralised news bulletins in various Indian languages also commenced from Delhi. These were initially in Tamil, Telugu, Gujarati, Marathi, and Pushto in addition to the earlier bulletins in English, Hindustani and Bengali, making a total of 27 news bulletins a day. By this time AIR gained popularity in all big towns.

Monitoring of foreign stations was another responsibility which came to be entrusted to AIR after World War II. The Monitoring unit worked from Simla for the most part.

Prior to Independence, some of the princely states also started running their broadcasting stations. At the time of partition of the country in 1947 India had 9 stations, 3 of which were located at Dacca, Lahore and Peshawar, (places which were transferred to Pakistan in 1947). The total number of broadcasting receiving sets was 2,76,000.

High Tributes

Tributes paid to the medium of radio by three eminent personalities of India during the past speak eloquently of what Indians felt about radio even in the initial stages of its history. Pt. Jawaharlal Nehru enthusiastically hailed, "Forward Radio," when he wrote in the visitors' book at the Bombay Station at the time of inaugurating the educational programme in 1933. Sarojini Naidu, the Nightingale of India, was rather more poetic in her entry a week later: "To harness the ether for the service of those who dwell upon the earth is one of the loveliest services that the modern age can render to humanity. So upward Radio." Rabindra Nath Tagore, our Noble Laureate, wrote a special poem entitled "Akashvani" for AIR in 1938 on the inauguration of the Calcutta shortwave transmission. The poem read:

"Hark to Akashvani up surging
from here below,
The earth is bathed in Heaven's glory,
Its purple glow,
Across the blue expanse is firmly planted
The alter of the Muse;
The lyre unheard of Light is throbbing
With human hues.
From earth to heaven, distance conquered,
In waves of light.

Flows the music of man's divining,
    Fancy's flight.
To East and West speech careers,
    Swift as the Sun,
The mind of man reaches Heaven's confines,
    Its freedom won."

Despite these poetic overtures, the fact remained that broadcasting in India could not become a mass medium during the British period. Being organised, planned and run by the alien government with little respect for national aspirations and scant knowledge of popular indigenous forms of entertainment, this most cherished medium actually lost the prestige and credibility it deserved.

MAKING RADIO AVAILABLE AND USEFUL FOR ALL

At the time of Independence in 1947 All India Radio consisted of only a small network of six stations. The number of receiving sets was 2.5 lakhs, that is one for every 12,500 persons in the country. This would hardly characterise the organisation as a mass communication system; and, among the available mass media radio was the only channel that had the potentiality to be quickly developed into a effective and truly national services. That was particularly so since the reach of the printed word was limited as only about 30 per cent of the population was literate and 80 per cent lived in villages. So of necessity the quick development of radio became the policy of the planners and the government under the successive five-years plans. Being the principal mass media, the objective of radio development after Independence was stated to be twofold: (1) to extend the broadcasting service so as to bring radio within the easy reach of the entire population, and (2) to devise programmes which would satisfy the needs and urges of a newly independent nation and at the same time provide an effective communication support to the tasks of national reconstruction. The nature of this aid as visualised by the Vidyalankar Committee was "to inform, persuade and inspire, to make people's minds receptive, to familiarise them with social and material changes that planned development brings in its wake and to develop local initiative for decision-making."

New Role and Innovativeness

Known as Akashvani since 1957 AIR in its reach and impact is now the biggest media organisation of the Union Government, with its programmes received by over three crore radio receiver sets in India. As a fast and instantaneous communication medium, it has an inbuilt advantage of over-coming the country's formidable literacy, linguistic, cultural and physical barriers. It could also involve different types of people and integrate various kinds of cultural, musical, dance and folk art forms that obtained in India. During the British period this was not possible because the alien government had little respect for national aspirations as also for indigenous forms of entertainment. After Independence this attitudinal obstacle ended.

Luckily, AIR had experienced personnel and "its innovative zeal was unbounded." For example in 1948, AIR Bombay arranged to interview the Hollywood star Greer Garson through an intercontinental link arranged by the P & T Department. In fact that spirit had infused largely the software policy of AIR. Accordingly the main thrust of its programmes was on putting out need-based innovative programmes. And that was the requirement of the time after the communal blood-bath of Partition, the urgency of emotional integration after the re-organisation of States and the initiation of the process of integrated planning. The programme advisory committees set up at various stations and guidelines evolved in August 1980 too have sought to inject a high spirit of professionalism in broadcasting programmes and to make them more receptive to constructive criticism. To this end listeners' letters, regular feedback surveys, and analysis of listener's reactions by audience surveys, and analysis of listener's reactions by audience research units to the programmes broadcast have also contributed their bit.

The manifestation of the spirit of innovativeness was evident when AIR covered sports events during Asiad 1982. In fact the coverage was a landmark. AIR broadcasted the various events to listeners all over the country. It also furnished facilities for dubbing and relaying the events to foreign broadcasting organisations. A team of nearly 550 people consisting of programmes, engineers and technicians were placed on duty in different stadia to catch the events in sound and convey them to listeners. All the technical infrastructure required for this historic event was provided internally.

Diversified Programmes

AIR's programmes have been diversified over the years. Today its Home Service programmes are transmitted for 3.91 lakh hours every year, excluding 1.76 lakh hours of Vividh Bharati programmes. In addition there are also external service transmissions which present programmes in 17 foreign languages and 8 Indian languages for over 56 hours daily to present India's viewpoint on important issues to listeners abroad.

Radio is known as a popular music box especially of the common man. Formerly music and particularly classical music was largely the privilege of the princely families or music enthusiasts. Now all kinds of music—classical, tribal, devotional, light, vocal, orchestral, folk and film based can be enjoyed by anybody possessing the set. In all radio stations about forty per cent of the total broadcasting time is devoted to music, music appreciation programmes and music lessons. As a result AIR is helping to preserve and develop the musical heritage of the country. Its musical programmes also go a long way in acquainting the younger generation with our classical tradition and help them to learn music through radio. AIR is seeking to scout new talents continually through regular music additions as well as annual music competitions. Young and promising artists of higher grades are regularly featured in public concerts as well as in zonal hook-up programmes. Classical music programmes comprise a weekly national programme of music which presents to the nation music by leading practitioners of both Hindustani and Karnataka schools of music. As a promotional measure, a festival of music, known as Radio Sangeet Sammelan is also organised every year. The recordings of these concerts are broadcast on AIR's network in the country. One of the significant achievements of AIR's national programmes in music as also of Radio Sangeet Sammelans is integration through the interaction of the two major styles of Indian music—the Hindustani and Karnataka. Eminent artistes as well as the more promising younger talents in both styles are presented in these programmes which are beamed on the national network.

Since 1973, it also broadcasts a national programme of regional music, which brings to the listeners the rich tradition of folk and light music of the various regions. Besides this, AIR stations put out sizeable chunks of folk and light music in their programmes. In 1952 it started the orchestral programme called "Vadya Vrinda" consisting of both Hindustani and Karnataka instrumentalists. The Delhi unit has done remarkable experiments in orchestration of Indian music and has a wide repertoire of a variety of compositions based on traditional ragas and folk tunes. The Madras unit comprises mainly Karnataka musicians. AIR is also paying equal attention to the development of folk, light and choral music.

Discerning people still like to listen to radio-news bulletins, for they attempt to give comprehensive and speedy coverage of news and views in addition to commentaries and discussions on current affairs. Besides focussing on major trends in political, economic, social, cultural and scientific fields, they give adequate attention to rural development, parliamentary proceedings and sports activities. News is broadcast daily through 254 bulletins. Of these, 68 bulletins in 19 languages are beamed from the home service from Delhi, 123 regional bulletins in 60 languages and dialects and 63 bulletins of external services in 24 languages. Specialised news, sports news, State and development news, slow-speed bulletins in English, Hindi and Urdu, a weekly bulletin of human interest stories, constitute other important bulletins of AIR covered by its own correspondents. In days when Parliament is an session, daily commentaries in English and Hindi review the day's proceedings in the two Houses. Since 1977 a weekly coverage has also been introduced. A similar coverage of State legislatures are broadcast for State capitals in the languages concerned.

The external services broadcasts are designed to project a true and objective image of the country to listeners abroad. They explain the country's point of view on matters of national and international importance. They also seek to acquaint foreign listeners with the ideas and achievements of India as an open society, as also its secular ideals. These broadcasts are equally meant to serve as a link with the people of Indian origin living or settled abroad.

AIR beams programmes for special audiences and occasions. Specific programmes are relayed for the Armed Forces, women and children, youth, students, industrial workers and rural and tribal people. Fourteen stations broadcast daily programmes for the Armed Forces. Fifty-five stations present programmes twice a week in regional languages for women with the objective of providing entertainment and imparting information on household topics. Programmes on family welfare, a very important sector of human process, are planned and produced by 36 family welfare units at various stations of the broadcasting network. These programme are integrated with the general programmes as well as those meant for special audiences like rural, folk, women, youth and industrial workers.

The early sixties saw a vast growth in rural broadcasting. Auxiliary transmitting centres were installed to extend the coverage of existing stations. Farm and home units were created at several stations. By 1965 every station of All India Radio started broadcasting special programmes for rural areas. Today all the stations broadcast programmes specially for rural listeners for about 30 to 75 minutes every day. Besides, a daily programme on hard-core agriculture and weather reports are broadcast for 45 to 55 minutes from 64 farm and home units, located in different AIR stations. These programmes aim at providing educational and informational support to the intensive agricultural and rural development programmes. They also seek to disseminate new agricultural technology to farmers in their local languages or dialects, besides covering other subjects like rural cooperation, animal husbandry, poultry, fisheries and cottage industries. Thirty one stations present specially conceived and cooperatively developed programmes called the Farm School of the AIR' where instructions and guidance on farming is provided to listeners. In this programme lessons on subjects like rice and wheat cultivation, use of fertilisers, dairy, poultry, fisheries and nutrition are given. The evaluation of these programmes have indicated that the audience find them extremely useful. It is interesting to learn from the record projects of agricultural universities that AIR's rural programmes are not only useful to the villagers but command credibility and acceptability. The imprint of AIR is best known by the terms radio seeds and radio fertilisers.

In order to provide a forum for the self-expression of the youth between the ages of 15 to 30 years, AIR puts out a programme for youth called 'Yuvavani' from 74 stations. This service provides an opening for the talents of this age group to present their viewpoints by participating in a wide range of programmes, talks, discussions, interviews, plays, features and music. Under this programme a youth news bulletin is also broadcast by the youths.

AIR is an extension arm of India's cultural activities. Its programmes include at least two plays a week. Besides, original plays, radio adaptations of outstanding stage plays, novels and short stories are also broadcast. Since 1956 outstanding plays from Indian languages are being transmitted in the national programme of plays. Other important links in this chain of programmes include monthly serial plays, humorous skits, etc. The national programme of features which commenced in 1956 focuses attention on matters of national importance or interested in political, economic, social or cultural spheres. In fact, many people with a literary bent of mind lay great store on AIR's literary and cultural programmes and draw mental exhilaration from them.

AIR is becoming a good aid in school education. Most AIR stations broadcast programmes based on the school curriculum to reach students in interior areas. Radio support to university correspondence degree courses is also provided by several stations.

Sports events in India and abroad are covered by reviews, running commentaries and voice despatches. In metropolitan centres a daily sports service is put out for 95 minutes covering all important sports events. In addition, two news bulletins, one in English and the other in Hindi, of five minutes duration, and weekly sports newsreels are also broadcast.

There are special occasions which attract special programmes on the national hook up of AIR. These include the Republic day. Independence day, anniversaries, visits of foreign dignitaries or the visits of Indian dignitaries abroad.

Radio is a popular entertainer too. Vividh Bharati, a popular broadcast for the purpose, is transmitted from 31 centres, including two shortwave transmitters at Bombay and Madras. The total duration of Vividh Bharati is twelve hours and forty five minutes on week days and thirteen hours and fifteen minutes on Sundays and holidays. The programmes which are generally acclaimed are music, humorous skits, short plays and features.

AIR introduced broadcasting of commercials on 1 November 1967. That is a part of marketing service, though it brings revenue too. Today the service is provided by twenty-eight centres. Advertisements are accepted in any language as tape recorded spots of 7,15, 30 and 60 seconds duration.

Radio as a mass media and the concept 'radio for all' will be roughly measured it terms of the number of radio receiving or transistor sets in the country. Since Independence these sets have increased manyfold to an aggregate of around 3 crores. The number may increase with the lifting of licence fee this year. In terms of diffusion rate it means nearly 4.4 sets for one hundred persons, still a figure below the minimum UNESCO norm of 5 sets for hundred people or one set for each family. In the Indian context, however, the redeeming situation is that one set can be used to serve a larger number of people beyond the household. In addition there are about 1.6 lakh community sets which operate in rural areas. Although the transistor revolution which has swept every part of the country has reduced the importance of community sets, some recent studies have underlined the need of continuing to have community receiver sets at least in selected areas. In the sixties when the community listening scheme was in full swing and assessed, it was revealed that the discussions in community listening and deliberations were excellent or good, and that participants learnt a 'great deal' or 'quite a lot'. Also, these forums developed rapidly into decision-making bodies capable of speeding up common pursuits of the village.

The government's interest in radio and its concern about its growth was reflected in the allocations to broadcasting in its successive five years-plant. As a result AIR grew in size and status. Today this national service comprises 86 stations (supported by 162 transmitters) including two Vividh Bharati commercials centres, one at Chandigarh and the other at Kanpur. In addition, the network includes two auxiliary studio centres at Bhubaneswar and Shantiniketan.

AIR's programmes are beamed from 162 transmitters, of which 126 are medium-wave. Speaking broadly we may say that AIR now serves about 90 per cent of the population and about four-fifths of the total area of the country. More than any other media, its sweep includes far flung areas like Leh in Ladakh, Tawang in Arunachal Pradesh and the distant islands like the Andaman, Nicobar and the Lakshadweep. One may hope that it is not in the distant future that AIR may reach its fullmoon day by claiming to cover all the areas of the country and its entire population.

Simultaneously AIR has also staged a leap forward in its software and research development aspects. Today it does face occasional fireworks or adverse comments of critics. It also has an intrinsic weakness of not enjoying high credibility because of its being a government controlled medium. Yet, AIR is considered by media authorities and researchers to have proved its worth and utility both as an informational channel and a development and cultural activist. Still more, it has provided healthy entertainment through its various light and humorous programmes. Extension research and other field surveys have already given great credit to radio as a credible promoter of a suitable climate for development and progress as also for having advanced farm educational and cultural renaissance. Its contribution in the form of transmitting useful and timely information, motivation and suggestions for rural development is conceded. Its sponsors claim that radio is helping to create a climate of opinion in which social change can take place and people could be involved in the process. That is the crux of the problem. One can safely presume that along with TV, documentaries and farm journals, AIR will provide an adequate communication umbrella to the integrated rural programme. This is can do through its rural broadcasts, feed back interviews, 'meet the activists and innovators' and critics series, impacts studies etc. Thus, AIR has an activising roll in furthering India's culture, education, music and other practising arts. The increasing number of walkman transistors and the growing popularity of listeners' letters are obvious indications, though one may concede that improvements and innovations know no bounds in this very challenging spoken word medium.

BENEFITS OF OTHER RADIO FEATURES AND RADIO-COMMENTARY

Preparation for the Commentary

In the audio medium, voice, sound effects and music are the critical elements which gain the listeners attention and hold it. The spoken word is crucial to a radio feature or a commentary. Special attention has to be paid to what is said and the tone in which it is uttered. A radio commentator is both the eyes and ears of the listener. A commentator creates verbal pictures in he minds of the receivers by simple combining the spoken word with music and sound effects in a creative fashion. While the narration itself is the result of a carefully written script, the tone in which it is delivered assumes equal if not more importance.

The contribution of the commentator is truly revealed by the fact that the final quality of voice, diction, intonation, etc., lends, take for instance the funeral ceremony of the former Prime Minister Jawaharlal Nehru, the sober restraint and dignified emotion in the commentator voice brought to the listeners the significance of the events, Prior to going on the air, the radio commentator must make a deep study of a number of things. In the above case, these included the route the funeral procession would take, and information on say the historical backdrop and occasions associated with Nehru.

Or, in another moment, with the body lying in state, the commentator would point out the numerous important occasions when Jawaharlal Nehru visited the Rashtrapati Bhawan, even at the time when it was the Viceregal Lodge and history was being made between India's top political leaders and the British viceroy, Lord Mountbatten.

The State of the Art

Lest you assume that a commentator's job is a cakewalk, first consider the amount of hard work that must have gone into preparing an interesting and informative commentary. The road to success an uphill task all the way. Ideally, a radio commentator would require a skillful combination of an observant eye, a ready tongue, nimble wit, imagination, tact and a sense of humour.

We have had a chance to mention the different occasions when running commentaries are broadcast; a sports event, proceedings of Independence Day and Republic Day celebrations or a funeral ceremony of an important leader of the State. We thus have different types of commentaries based on their subjects and occasions. A commentary is loved and interspersed with location, sound or ambience.

A radio feature has any number of topics under the sun upon which to elaborate. It is a creative capsule presentation of an equally creative area or theme. Narration is a crucial element of a radio feature. The spoken word is liberally supported by sound effects and music.

Commentary is an art and its successful practice depends on attention to a special technique-descriptive power and narrative style. This is possible only when one has the capacity to notice the finer details and also express them in simple but evocative terms. Without preliminary preparation, the commentators would find themselves in serious trouble. The best plans can be thrown out of gear by some unforeseen circumstance say a new twist to the event.

An intelligent and resourceful commentator will be able to place his thoughts and ideas across without much difficulty. In order to evoke a vivid word picture. One would require alert human faculties, and a vast knowledge of men and matters gathered through extensive reading and intense involvement in the social, political and cultural developments in the country.

In short, a radio commentary describes an occasion or event in vivid words. The attempt is always to verily transport the distant listeners to the scene of action or attention. Naturally, the commentators has to be all ears and eyes to perform.

Step by Step Writing of Commentary/Feature

A commentator has to obtain all the information necessary about the location of the commentary broadcast; the occasion, the background information, technical terms and areas of emphasis. Accordingly, he will have to write the script or take notes. Usually, commentators visit the site of action, e.g., stadium, football or hockey ground, the scene of a cultural show, the route of a funeral ceremony, the cremation or burial ground, etc. This he does to familiarise himselves with intricate, even trivial details and to trace the history leading up to the occasion, then he is ready to make a layout of the course as seen from one or more vantage points, and note all the important details, finally, before the broadcast day, he must keep a sharp lookout for any picturesque spots or amusing incidents to relate during the commentary.

Sometimes, technical snags can cause problems for the unprepared commentator. As a result of interrupted transmission the commentator may be forced to end the relay commentary at short notice. At the other end of the spectrum, one may have to prolong the commentary indefinitely! This actually took place once, during the visit of the U.S. President Eisenhower to India.

Since the arrival of his plane was delayed by quite a few hours, the commentator had to go on and devise his own "show" to see him through his trouble. These days, one can promptly had the programme back to the studio in the face of any technical faults. Even that requires commentators with presence of mind to size up the situation without any panic.

There is a well known saying that anyone can say anything into a microphone, but what comes out at the other end is what matters. This holds good in the case of commentators as well. Commenting is a balancing act neither must you unnerve the listeners with monotonous, high-pitched or excited commentary from beginning to end nor must you slip up in what you say and thereby irk the listeners. Undoubtedly, rendering commentary is a job best left to mature people quick on the uptake, capable of taking any new development in their stride.

The audio medium thrives on word pictures created in the mind of the receiver. A programme meant for broadcast, let us say a commentary, a feature a play, etc., which ignores this peculiarity is so much a waste of breath on the air. It is on the projection of one's personality through the microphone that the effectiveness of a broadcast ultimately rests. Broadcasting, therefore, is not a mechanical process. "The technique of delivery is of fundamental importance," as pointed out by the late Prof. Harold Laski with reference to successful broadcasting. Winston Churchill had said during World War II to the Americans. "Give us the tools, and we will finish the job." The broadcasters tools will be discussed in the next section.

A radio commentator/feature narrator must have certain essential physical characteristics. In using the word physical, we imply the personality of the commentator as reflected in the cradence and vibration of speech delivery which actually holds the key to success on the job. We shall now enumerate the various desirable attributes of the commentator and narrator.

Whether one is a commentator, interviewer, news reader or announcer, one must take care of one's voice. To make a beginning, one needs to breathe correctly, enunciate clearly and attend to the vocal rhythm in order to ensure a liquid stream of pure sound.

How does one breathe properly? One must breathe from the diaphragm as one does when asleep. This in turn helps you to speak rhythmically and the reserve breath helps to carry you smoothly from one sentence to another. Breathing from the diaphragm instead of the throat or through the nose also helps you to avoid extreme breathlessness, which the microphone is quick to catch and amplify. Hence, never speak on your last breath.

Proper enunciation is extremely important. This helps you to overcome the slurring of speech to a great extent. One way is to properly enunciate the consonants while leaving the vowels to look after themselves. How does one achieve this? By opening one's mouth widely to raise the soft palate and keeping the lower jaw forward. By doing so, you give free play to a remarkable variation of sound and the English language, in particular, is rich in sound.

If one does not pay due attention to this aspect, one would throw away a wealth of meaning and emphasis.

Speech Rhythm

Rhythm is the life blood of speech. Without this very important input, speech becomes lifeless and mechanical. Nothing kills a broadcast more surely than the monotony of delivery. Remember, words are the petrol of the speaker's thoughts, and rhythm is the oil that lubricates that vehicle. Therefore, he broadcaster's sound not only sends messages, but also ensures that the listener is persuaded by it. Again, every broadcast has to be kept alive and this is mainly achieved by correct emphasis, stress, and pause in the speech.

All top class commentators/broadcasters pitch their voices higher than used in ordinary speech. This is because the very low notes are apt to muffle the consonants, causing a booming effect on the microphone. Even so, in an interview, the lower the pitch of the broadcaster's voice, the less is the energy required-Also, there is less tendency to tighten the throat and back muscles. The low pitch is best for speech. However, it must be achieved with ease and not by suppressed sound. This definitely contributes to attractive and effective narration and commentary.

Language

The broadcaster's language is needed easy to understand because only the simplest possibly terms are used. It is important to remember that the language be intelligible to the majority of the listeners. You must know that one picturesque phrase will do more to arouse the listener's interest than a bunch of literary and idiomatic expressions.

Usually, a listener reacts quickly to the broadcaster's manner, there are a few thumb rules which a broadcaster would do well to follow. We shall enumerate these rules here.

(*a*) Don not patronise the listeners. At least, for having taken the trouble to listen to you, the listeners ought to be treated with courtesy. The listener is a friend. Would you not treat a friend in a natural and respectful manner? So, address the listeners too on equal terms.

(*b*) Be friendly without being familiar. Do not take the listeners for granted. Do not shout or preach. Speak impressively, confidently and with dignity.

(*c*) Finally, be yourself and not what you would like the listeners to think you are. While the listener is seldom deceived, you may flounder and reveal your true colours sooner rather than later. Give your listeners the best of listening by being your natural ebullient self.

The art of writing a production script for the radio very often lies in the art of knowing what not to say. It is said in BBC TV circles that a commentator is paid as much to comment as to keep quiet.

The term "Padding" refers to the filling out of a sentence, publication, etc., with superfluous matter.

While preparing the script, for a radio programme, you must not pad out the narration. As a rule, avoid using unnecessary words, and admitting irrelevant contexts or distantly related topics in your scripts. One dull patch can imperil the broadcaster's bold on the listeners. Therefore, never let your script or commentary/narration meander even for a moment.

Tips for Good Script

We should acquaint ourselves with the ingredients of quality radio scripts. Their success rests entirely on the right mix of words and sounds in the narration/commentary.

Keep the Script/Commentary Moving

The shorter your sentences and crisper your narration, the greater will be the commentary's impact. While adding has to be avoided at all costs, repetition of the main points is permitted and may even necessary. This you can do towards the end of the programme in the form of a summary. It is to ensure that all the points that you want your listeners to remember are, in fact, briefly expressed again.

Enliven the Script/Commentary

The wider your vocabulary, the more visual are your images. And this, in turn, helps you to vary your form and have a firm hold over listeners/audience.

Be Completely Natural

It is very life of your broadcast that you read aloud your narration/script/commentary as you write, if it is not off the cuff broadcast. If it sounds natural, as though you were talking, you are on the right line. If on the other hand, it sounds like formal written language, you will immediately know you are off the track. Get your friends and well-wishers to help you with their reactions. This tried and tested method will be of immense help to you in improving your performance.

Keep Cliches Out

This applies to hackneyed phrases as much as to journalistic ones. The microphone only reinforces their staleness. It is only radio journalism at its worst.

Keep on Looking for the Needs of the Market

It is well to remember that broadcasting is essentially a family affair. Good taste is what matters and should, be the main criterion. The writer's script should be simple and conjure visual rather than oral images in the listeners mind. Remember: short sentences and short words are always more effective than long-winded and pedantic phrases.

Do not Talk Down to the Audience

In any programme where the spoken word dominates in a running commentary or any other one must take precaution against any slip of the tongue that would offend a listener. Be professional when you have to explain some matter. Do not sound like the know all teacher talking down to the students.

Language of the Radio Commentary and Feature

The language of speech differs considerably from the language of writing. The differences arise in the:

- vocabulary,
- sentence length,
- sentence structure, the
- density of distribution of information, the
- writer speaker's intention and attitude to the subject and toward the listeners.

The important factors which make or mar a commentary are the–

- stress on syllables and the
- accent of one's speech together with the

- amount of information and the
- actual speed of delivery.

One must take into account the varying spans of memory and levels of comprehension of different listeners. Clarity of both content and actual narration is thus essential.

One must remember that it is an individual's memory and comprehension that we deal with. Listeners generally cannot turn to anybody for explanation. Neither can they be expected to have reference books at hand. Therefore, all the necessary aids to memory and comprehension are, generally built into the programme material. Scripts for radio commentary and features ought to be written with this vital factor in view. The narrators too must be chosen with due care and given instructions about the required pace of narration, style of delivery.

The radio is an audio medium. The secret of the ideal radio broadcast is the unexpected will to woo listeners to stay tuned for the entire programme by simply providing the right fare. A good radio feature or running commentary is one that strives to describe the subject or phenomenon cogently and comprehensively.

A radio feature and commentary is written in words that create appropriate atmosphere and concrete pictures in the listener's mind. It is by improving script and presenting it creativity that a radio feature writer and commentator make even the most complex subject appear simple. It is in their hands to make listening a gainful and lasting pleasure. They have only to wield their power correctly to endear themselves to their audience.

AIRING RADIO-NEWS

You have studied writing news for the print media and the fundamentals of good writing. Broadly, those guidelines also hold good for radio-news. However, radio has its own special characteristics. Its vast reach covers almost the entire country, and it has a big audience. This includes the educated as well as the illiterate; the latter, however, are the greater majority of listeners.

In this chapter, we will discuss the manner in which to write news for radio so that it may basically understood by the listeners. This can be achieved by using simple, easily understood words and expressions as used in daily conversation by the people. We will also consider how news can be written for an audio medium like radio, over which an item is heard only once; and the listeners do not have the facility to refer back to a news item, if they have not followed it in the first instance. Radio-news must be easily understood.

The Structure of News Services Division of All India

All India Radio's News Services division is one of the largest radio-news organisations in the world. It works round the clock and plus out news for a duration of 38 hours every day. It broadcasts 284 bulletins daily.

These include: 146 bulletins from Delhi in Home and External Services, and 138 bulletins from 41 Regional News Units.

AIR's News Services Division is headed by the Director General News, who is assisted by four Additional Directors General and seven Directional Officers. They supervise the functioning of the General News Room, Reporting Units, Current Affairs Units, Language Units, Regional News Units and the Monitoring Service. The last mentioned service monitors broadcasts by foreign radio stations and makes them available to AIR.

Apart from receiving news from news agencies, AIR has over a hundred regular correspondents in the state capitals and other important centres. It also has 232 district level part-time correspondents spread all over the country. Besides, there are seven special correspondents posted abroad.

The Functioning of Radio-News Room

Through all these sources, AIR receives three to four lakh words of news items during a 24 hour period. It is the responsibility of the news editors of AIR working in the General News Room in Delhi to examine this copy and select the usable items.

The person who oversees this operation in every shift is called the Editor-in-charge. He is assisted by a number of Editors. Their job is to carefully read the items which have been picked up for possible use, then rewrite and reduce them according to the merits of the story. After all, the longest radio bulletins, of 15 minutes duration, can only carry over 1500 words.

Some people compare a radio bulletin with the front page of a newspaper into just the front page. That is what the radio editors are required to do all the time. Brevity, thus, is the hallmark of radio-news bulletins. The charts representing AIR news network and news flow provide a general overview of the countrywide news network, and the work distribution among domestic and foreign correspondents, part-time and regular correspondents.

News Services Division
AIR News Network
NSD Headquarters New Delhi
General News Room

Reporting Unit	News Agencies	Monitoring Reports		News Bulletins
Overseas Correspondents				
Colombo	Islamabad	Regional	Outstation	
Dhaka	Kathmandu	News Units	Correspondents	
Dubai	Singapore	Harare		

Part Time Correspondents

- Agartala
- Ahmedabad
- Aizawal
- Aurangabad
- Bangalore
- Bhopal
- Bhuj
- Bombay
- Calcutta
- Chandigarh
- Delhi
- Dharwad
- Dibrugarh
- Gangtok
- Gorakhpur
- Guwahati
- Hyderabad
- Imphal
- Indore
- Jaipur
- Jammu
- Kohima
- Kozhikode
- Kurseong
- Leh
- Lucknow
- Madras
- Nagpur
- Panaji
- Patna
- Pondicherry
- Port Blair
- Pune
- Ranchi
- Shillong
- Shimla
- Silchar
- Srinagar
- Trivandrum
- Tirchy
- Vijayawada
- Kochi
- Agra
- Allahabad
- Amritsar
- Anantnag
- Belgaum
- Bhubaneswar
- Coimbatore
- Dhanbad
- Dharmasala
- Itanagar
- Jallandhar
- Jodhpur
- Kanpur
- Madurai
- Muzaffarpur
- Patiala
- Pauri
- Rajpur
- Rajkot
- Rewa
- Rohtak
- Smabalpur
- Siliguri
- Tezpur
- Udaipur
- Varanasi
- Vishakapatnam

New Services Division News Input and Outflow Chart

Reporting Unit	News Agencies		Outstation Correspondents	Monitoring of Foreign
HOME POOL	PARLIAMENT POOL	EDITOR-IN-CHARGE	SPORTS POOL	FOREIGN POOL
Hindi Unit	Compilation desk English Bulletins		Compilation desk Languages Bulletins	Compilation desk Languages Bulletin

Language Units
Foreign News Desk

Excl. Bulletin English Compilation	Extl. Language Compilation	Extl. Language Compilation	Extl. Language Compilation
	Language units	E.S.D. Language Units	E.S.D. Language Units

Total Output of News on AIR

The table given below will give you an idea of the number of news bulletins that All India Radio puts out in the different languages every day. The duration indicated here is the sum total of the duration of the different language bulletins.

AIR News: Facts at a Glance

Total number of news bulletins		: 284
	Duration	: 38 hrs. 25 mts
Number of news bulletins Delhi in Home, External and Regional Services		: 146
	Duration	: 20 hrs. 8 mts
(*a*) Home bulletins in Hindi		: 23
	Duration	: 2 hrs. 35 mts
(*b*) Home bulletins in English		: 22
	Duration	: 2 hrs. 30 mts
(*c*) Home bulletins in regional Indian Languages		: 4
	Duration	: 7 hrs.
	Languages	: 17
Total number of External bulletins		: 65
	Duration	: 8 hrs. 50 mts
	Languages	: 24
(*a*) Number of External bulletins from Delhi		: 58
Duration		: 8 hrs. 3 mts
	Languages	: 23
(*b*) Number of External bulletins from Regional News Units		: 7
	Duration	: 55 mts
(*c*) Number of news bulletins from Regional News Units		: 131
	Duration	: 17 hrs. 23 mts
	Languages/ Dialects	: 62

Number of Regional News Units	: 41
Number of Regular AIR Correspondents	: 101
Number of AIR Correspondents	: 7
Number of Part-time AIR Correspondents	: 232

Types of News Bulletins

In the previous section, we see in the table that there are three service-Home, External and Regional provided by the All India Radio and each of these services puts out news bulletins in the regional languages. The External Service Division looks after the news bulletins to be broadcast abroad. The Home Service in Delhi originates news bulletins in English and Hindi for broadcast on the national network. Some news bulletins in the regional languages are also broadcast from Delhi in the respective regions.

These categories or types of news bulletins are based on the audience profile. Another basis for categorising news bulletins is their duration. The 15 minute 'Morning News' and 'Samachar Prabhat' in English and Hindi respectively, which are broadcasted at 8.00 a.m. and 8.15 a.m. everyday, include a commentary and headlines in the day's newspapers in addition to the news. There are hourly bulletins of five or ten minutes too, round the clock. Special bulletins are aired whenever necessary. Exclusive daily bulletins on sports, reports on the stock exchange, special bulletins during Haj pilgrimage or floods: all these news bulletins are prepared by the News Services Division.

Compilation of News

News items pour into the News Services Division of AIR from its own correspondents situated both within and outside Delhi, from its Monitoring Service from news agencies. Thereafter, this 'newspool' is sorted out into categories. Let us first consider pool copy.

The AIR News Room in New Delhi feeds news for some 146 Home and External news bulletins. How is that done ensuring uniformity and speed? To meet this requirement, AIR has introduced a system of what is called "newspool' which is prepared in English. All incoming news, after editing, is put into the pool which is split into news categories such as Home, Foreign, Parliament and sports. Inclusion of an item in the pool means: (*a*) the news which is broadcast worthy, (*b*) it has already been written in broadcast style and (*c*) any linkages and backgrounding required has been done.

The entire pool copy is distributed among all editors compiling different bulletins. Home as well as External. The editors preparing the pool copy also look after the important developing stories and constantly go on revising and updating them. They also prepare round ups of important events and happenings such as riots, floods, disturbances, and whatever is in the news.

The News Room has four shifts during a day and each shift issues its own pool copy, during morning, day time, evening and night.

Compiling editors working on the language bulletins look after a group of bulletins like languages of East and South India. Similarly, the external bulletins are also combined.

Compiling News Bulletins

The compiling editors further select and prune the news items, keeping in view the duration of each bulletin and the interest of the target audience. They prepare the bulletins and, together with the headlines, send them to the Language Units and the External Services Units where they are translated and put out in their languages.

Translation of news bulletins in different languages should not be mere transliteration. These should be re-written keeping in view the direction, style and flow of the language into which the translation is done. Also the format of the language bulletins should be different. For instance, Ganesh Puja needs prominent place in Marathi bulletin, Durga Puja in Bengali and in Urdu, Kashmiri and Pushtu bulletins.

Selecting the Headlines

Having prepared the bulletin, the editor has to decide which items apart from the lead story are to be headlined. There is only one criterion which are the items that will interest the largest number of listeners. Headline them and that will ensure a good audience for you.

Headlines should be brief. As a rule, they are repeated because quite often many listeners tune in late and only from the repeat headlines do they know the important news of the day.

A work of caution. If you are editing a radio bulletin, you must take care to see that all items which figure in the headlines are included in the bulletin. Sentences that are read after the headlines must give details about the main news.

Use of Spoken Language in the News Bulletins on Radio

As the news on the radio moves fast without the facility of recall which is possible, though, in the case of newspapers whatever is broadcast must be clear, precise and to the point. Sentences should be short and direct without sub clauses. Brevity is essential as a minute of broadcast time can take about 100 words, thus giving an editor the choice of about 1000 to 1100 words to cover world, national and regional news. There is a great constraint of space in radio, hence broadcast news must be big and important and should be put in crisp and easily understood language. Ceremonial items or didactic speeches distract the attention of the listener who can always switch off or change over to some other programme.

Clarity Through the Use of Simple Words

There should be no need for a dictionary while listening to a radio bulletin. It should be in words which are common in everyday speech. For example, "The work has started" and not "the work has commenced," "The play has ended" and not "terminated."

There is no place for "officialese" in bulletins. The words chosen should create visual images in the mind. "Roads are under water" or the "telegraph poles have been uprooted" or "The bridges have been washed away" sound better than "The communications have been disrupted." Words like "hospitalised" or "minimised" have no place in a radio bulletin. Instead say "Admitted into the hospital" or "reduced to a minimum."

Short Sentences

While writing news for the radio, you should not use long sentences. Avoid subordinate clauses; they are rarely used in every day conversation.

The attention of an average radio listener can not be held for long: so the sentences as well as the paragraphs have to be short. Avoid a sentence which is longer than 18 to 20 words. Otherwise/ most listeners will not be able to follow it. So, the best thing to do is to split the long sentences. You must always put only one idea into one sentence.

The news items to be broadcast on radio also have to be short, generally not more than 90 or 100 words an item. Some items can be even shorter.

Long items carrying ministerial speeches can only bore the listeners. It requires the mature, professional competence of a good radio or TV editor or reporter to pick up news points in the ministerial speeches and make crisp item out of them.

Present Tense

Where possible, use the present tense. Broadcasts on radio should appear to the listener to be happening at that moment. Instead of saying, "the new generator was switched on yesterday" say "The new generator has been switched on." Instead of saying, "The Prime Minister said today that the country's economy is booming," write "The Prime Minister says the country's economy is booming."

Editors of radio-news do not bother too much about rules of Written English. They always opt for the spoken language. Too many figures should not be given in radio-news. These only confuse the listeners. Where figures become necessary, round them off. Instead of saying, "398,879,968" say "about 40 crores."

Explain technical and unfamiliar words. For example, the right of Habeas Corpus. This means that the authorities must bring the suspect before the Judge.

Avoid sound clashes such a as "the building was built by a local builder." Instead, say "the storehouse was the work of a local builder."

The arrangement in news writing is the reverse of the literary style of writing. In the literary pieces, introduction comes first, then the growth of the plot, followed by the conclusion. In news writing, the lead, or the climax, comes first, then other elements of the story in diminishing order of importance.

While drafting an item, read and re-read it to find out what is the news in it. And that is your lead or intro of the story. In radio-news, most editors devote quite some time to it. Once you have located the intro, the rest of the item takes shape quickly. Leave optional points towards the end of the story so that if your editors are running out of time, they can delete these without any difficulty.

Role of Gatekeepers and Credibility

By this time, you must be familiar with the work of a 'gatekeeper' in compiling editing and presenting news in the print and electronic media. In the news on radio, the reporters and editors are the 'gatekeepers'.

They make important decisions about whether or not a news item shall be reported and also carried on air. Now, we must consider in more detail the role of bulletin editors and radio reporters. Speed is of essence in radio-news. The deadlines are much sharper than in the newspapers. With the introduction of hourly news bulletins, any item which is more than 60 minutes old might not be fresh. Consequently, reporting and editing for the radio calls for skills and speed. Events need to the reported as they take place to meet the first available news bulletins, developing stories need to be covered repeatedly adding fresh bits.

Let us now discuss the role of the bulletin editor who is preparing the 15 minute main English news bulletin for the evening. On a given working day, a bulletin editor in the evening may have 45 to 50 items to consider from the day and evening shifts. They will include Home and Foreign news, Parliament news if Parliament is in session and Sports news. The items vary in length, say from 50 to 150 words. Some may even be of 200 words or more.

Let us suppose that you are the editor and you have 4,000 to 5,000 words of news. A 15 minute bulletin can carry only 1,500 to 1,600 words. This can vary depending on the newsreader who is reading news that evening. The pace of reading varies among newsreaders. This means that you will have to leave out less important items of the 'day pool' which will have gone in the day bulletins and further reduce the evening items.

Preparing the News Bulletin

Let us assume that you select 15 or 18 items to go into the bulletin. How do you decide the order of items in your bulletin?

There is no hard and fast rule. The first major decision you have to take is: what will be the lead of the bulletin? Generally, home stories are given preference. But if there is some foreign news, for example the death of a foreign VIP, overthrow of any foreign government, or a major air disaster naturally that becomes the lead. But then what goes after that? If there are other important foreign stories that day, they can go in the first bunch and the home stories can come in the second and the third bunch or "breaks" as they are called in the news room. A "break" in a bulletin comes after about five minutes and is meant to give a little pause, which gives welcome rest to the newsreader as well as prepares the listener for more news to follow. Generally, editors prefer to end the bulletin with sports news or with a human interest story.

Earlier in this unit, we talked about AIR's regular correspondents, part-time correspondents and special correspondents posted abroad. No good radio organisation can function without a team of trained, competent correspondents of its own. A case in point is Mark Tully's contribution to BBC's service in India.

In addition, all radio, organisations also subscribe to news agencies. But the main 'subscribers of news agencies are newspapers. So, the news agency copy is done in newspaper style and has to be redone for use in radio bulletins. A radio organisation needs its own correspondents to stories in the radio style so that these can go straight into the bulletins. Radio reporters keep radio bulletin timings in mind and work to meet their deadlines.

Voice Despatch

Apart from giving scripted stories, an important part of a radio reporter's job is to give voice despatches which have become an essential part of radio bulletin in the developed countries. The purpose of a voice despatch in the correspondent's voice is to supplement, add colour and authenticity to the basic news. An eye-witness account or an on the spot report complete with background sound can be very convincing. Writing a voice report is different from writing straight news. In a voice report you can add something to the news that is more personal.

Unfortunately, in most of the developing countries, it is not so. Our radio bulletins still continue to be mainly scripted and a voice despatch is provided only rarely. In India and in most other developing countries, reporter's voice despatches are generally used in Radio-Newsreel and scripted items go in the news bulletins. In the developed countries, the distinction between a radio bulletin and radio-newsreel has disappeared. They however maintain this distinction in their external bulletins. The developing countries on the other hand, produce news bulletins quite distinct from newsreels.

Interviews and Commentaries

Radio reporters and even editors often have to do interviews for or news related programmes such as Radio-Newsreel, or commentaries such as Spotlight and Current Affairs Programmes.

Unlike newspaper interviewers, radio reporters must have a clear idea of the duration of the recorded interview they want to have with an author, an actor or artist or a politician. They should be able to brief the interviews about it in advance. The interviewer has to carefully listen to the answers and then follow them up with further questions. The interviewer must learn to put searching questions without being offensive.

Credibility

While doing a commentary script or a report, give a total picture, the good and the bad; whether you are writing about a project, a factory, a strike, a VIP visit or anything else. The listener will like to have from you an unbiased picture. It is this fairness and accuracy in news and other programmes which gives credibility to a radio organisation.

It is that the electronic media in India and other developing countries are still under government control. That itself imposes certain constraints in the free functioning of radio and television. In India, the Prasar Bharati law has been passed by Parliament. The Act provides for the electronic media entrusted to an Autonomous Corporation.

One does not know how and when that will happen. But whether the electronic media remain directly under the government or are entrusted to an autonomous corporation, the quality of their programmes will essentially depend on the professional competence of the staff, editors, reporters and producers.

Also, their ability to stand up against pressures and produce their programmes fairly and fearlessly. It is only by doing this that radio and television organisations all over the world have become increasingly autonomous in their functioning and earned the respect and admiration of their audience.

During the last 60 years or more, radio in India, first under the British and later in free India, has played an important role as a medium to educate, entertain and inform the people. It has promoted arts, literate and drama. Even in the field of agriculture, it made a significant contribution by propagating an improved variety of rice, which later came to be called "radio rice."

In times of crises, such as wars with Pakistan and China, or floods or drought, the radio, has provided timely information through its news bulletins and other programmes.

Role of News Readers

So far we have been talking about the role of Editors in drafting news items and preparing a radio bulletin. What about the role of the newsreader who presents the news to the listener? Actually, a newsreader has an important role to play. A well edited bulletin can be marred by bad news reading.

At the same time, a poorly edited bulletin can be lifted up by a good newsreader. The older generation of listeners recall how in the past they remained tuned into AIR just to listen to news reading by Melville de Mellow even when there may not have been much hard news in a bulletin. Attention must be paid to the speed of reading; it should not exceed 100 to 120 words a minute; Newsreaders can definitely be a guide to young listeners on correct pronunciation. A good voice, diction and pace of reading, giving pauses at the right points, make it worthwhile for anyone to tune in and listen to the news.

Challenge to Radio from Television

Today, radio is facing a big challenge from television and has been pushed into the background, especially in the metropolitan cities. In the developed world, say the US, Japan and Europe, where television is far more developed than in India, radio has made some adjustments in its programmes and found news areas for itself where it is doing well.

In all these countries, radio-news is still the fastest means of communication. This is no reason why radio in India, including radio-news, should not carve out a similar place for itself. Radio editors, reporters and newsreaders have to accept the challenge posed by television and give to their listeners prompt, well-balanced posed by television and give to their programmes. Radio needs to give latest local information to those who need it: housewives need to know about the market rates, and motorists about the state of roads. The weather conditions are as important for pilots or gliders or ham gliders and the like as for other citizens including agriculturists. The radio medium indeed has much potential.

3

Understanding the Power of News Media: A Comparative Study of Radio and TV News Writing and Editing

INTRODUCTION

The news media on the whole have seldom been more affluent, and more on the defensive, than they are today. The better newspapers and magazines have been inclined to place a large share of the blame for this peculiar state of affairs on the follies of television. The electronic media, in turn, have pointed with angry righteousness to some of the more reprehensible practices of their printed opposition.

When areas of lamentable public ignorance in the news have been disclosed, both have been accused of under-informing and even misinforming the people. In return, the more despairing among. The Journalistic Establishment have tended to question the intellectual competence of a public that has seemed too often to be more devoted to soap opera, packaged sex, and animated comic strips than to the necessity for accumulating information to advance the slow and sometimes painful process of self-government.

It has been the kind of distressing situation in which an ancient Quaker once observed to a friend at the Village Meeting House: "Everybody here is crazy except thee and me, and even thou art a little queer."

The State of the Profession

Nevertheless, the concern that many responsible journalists feel over the state of their profession in the United States is very real and it is soundly based in the main. Not since the era when 80 per cent of the American press unsuccessfully opposed Franklin Delano

Roosevelt during his four campaigns for the Presidency has the serious journalist felt less like a leader of public opinion and more like a follower. The strictures of the United States Supreme Court in the cases involving free press and fair trial, the frustrations of the Vietnam War and its coverage, and the lingering public resentment of the journalists' role in the Lee Harvey Oswald television murder all have played a part in this slump in news media prestige.

But the trouble goes somewhat deeper. There is demonstrably little public enthusiasm for the undoubted rights of the news media, for their perennial crusade for freedom of information and more than a little suspicion of the noble postures of the American journalist. When James Reston observes, "The credit of the American newspapers with the American people for accuracy and good judgment is not high," it is not necessary to draft a questionnaire and take a public opinion poll to conclude that he is right. There is also little doubt that the credit of television ranks considerably lower with the well-educated viewer, no matter how enthusiastic the kids are over the animated comics and the housewives over the soap operas and tenors.

The point is that the bulk of the news media and a large section of the public are not on the same wave length for the diffusion of all but the most immediately important news, and have not been for a long time. There are few open signs of displeasure; instead, there is simple evidence of a prevailing skepticism and lack of enthusiasm that creates concern over the lack of public empathy for its news media as a whole.

Earlier in the century, when the country was smaller and the news much simpler, the situation was markedly different. A less affluent and a less educated public was far more inclined to embrace its newspapers and magazines with a fanatic loyalty or damn them with shrill invective. There was precious little apathy then, for it was the time of Joseph Pulitzer and others who fought many a good crusade. Everyone could find a hero or a villain in such a company; some, like Upton Sinclair, even cried out that the whole thing was a miserable capitalistic conspiracy.

In many an immigrant home, the favored daily newspaper was second in importance only to the Bible and was read with great care. I remember that when my father read aloud from his favorite editorial page, my mother and I were dutifully silent. Nor are my memories as a child unique, many another, coming from such an environment, will agree that a favoured newspaper occupied a place of respect in the home. It was the communicator, teacher, moral force, and even the intellectual leader at times of a whole generation of new Americans. Their children, for the most part, have come to take much of the press for granted and to look at television for ammusement plus a little news.

Ironically, the press as a whole is much better in the latter part of this century than it was at the beginning. Many more of its leaders take their public responsibilities with the utmost seriousness. They print more news and offer a greater diversity of opinion. While a monopoly position in all but a few cities has killed off a choice among newspapers, it has also caused many surviving newspapers in metropolitan centers to make substantial improvements.

Whatever gains the press as a whole has made in these areas, however, has been offset in the public mind to a considerable extent by the development of the electronic media as the first source of breaking news. In addition, the rise of the weekly news magazine has given millions of people access to explanations of national and foreign news that are either omitted or sketchily published by many small and medium sized dailies.

Finally, and this is most important of all, the essential character of the audience for the news media has changed. If the image of the news media is not one that provides general joy and satisfaction within the republic, it is far worse abroad where feelings range from professional jealousy to uncritical but emphatic dislike. To the world at large, the American press is a fat and luxurious varicolored jumble of newsprint, much of it wasted on irrelevancies, which reaches the stupendous proportions of a five or six pound advertising throwaway on Sundays. American wire services, despite the care with which they are edited for foreign consumption, are regarded as vehicles of American policy even by sophisticates in foreign governments. American news magazines, tartly and tightly written, often are resented when they produce unfavorable accounts of foreign lands and accordingly charged with putting the American panorama in softer focus. As for American radio and television, they are the repositories of all the historic complaints first registered against American movies—crass, crude, money-grabbing representatives of a non-culture.

This exaggerated catalogue of journalistic short-comings is largely accepted by the American intellectuals who have great respect for foreign opinion. But it would be a mistake to dismiss the impatience, even the outright dislike, of the news media by the intelligentsia as the built in prejudice of a small number of inveterate critics. There is no doubt of the blindness of the prejudice, nor of the tremolo of scorn with which the very word, "Journalism," is uttered in the classroom; yet, such attitudes are an important part of the foundation of mistrust and doubt of the purposes of the news media that exist in the United States.

It is not enough to hold up a few great newspapers, magazines, or television programmes as exhibits to prove the virtues of journalism, nor can the work of the wire services be justified by showing how many million words are transmitted each day to thousands of outlets all over the world. Unlike the physician, the scientist, the lawyer, clergyman, or engineer, who are judged by their noblest works as a rule, the journalist is generally assessed by his worst performances. This may be unfair, but it is true. The youngest and greenest journalist knows, almost instinctively, that there will be latent hostility to his every inquiry even if he tries to learn who stole the cake at a Sunday school picnic. Somebody will always turn up who has an interest in delaying, twisting, or suppressing the news.

The suspicion of the journalist's intentions is, of course, not particularly new; it also is not confined by any means to any common in particular. Even in closed societies, where the journalist is supposed to be the mindless creature of the State, there have been instances in which government officials have been unduly annoyed by inquiries from their own press people. There should be little cause for wonder, consequently, that in the scant two centuries of independent journalism, mainly in the English speaking nations of the world the journalists have tended to cluster together for mutual effort, a kind of faltering semisupport, habitual professional shop talk, and the pleasures of social diversion. While they have never been able to present a solid front on very many issues, they have chosen to live for the most part in a self-imposed pale inhabited almost exclusively by other journalists, congenial news sources, and a few carefully chosen outsiders.

It has been observed in consequence by those who despair of the journalist and ridicule his profession that he prefers, and indeed, often enjoys his own company during leisure hours. He has also been accused, sometimes with justice, of gathering his ideas from his fellows and sometimes promoting his own wrong-headed notions, instead of departing from the herd for a cold, lonely, painful search for the truth. Nobody can determine, of course, the extent to which news and ideas are shuffled and reshuffled instead of being independently reported and assessed. However, the sameness with which the news is reported, even by correspondents who are completely out of touch with each other, is one of the less pleasing aspects of American journalism today. Outside the confines of most metropolitan communities, news tends to be what the wire services say it is because the individual local newspaper and electronic media sometimes have no other quickly available resource to challenge the wire service file.

Nevertheless, it would be a mistake to place exclusive blame for these shortcomings on the publisher, the broadcast executive, or the responsible editor. Of the 600,000 people employed in all forms of journalism in the United States, perhaps 60,000 are engaged in news gathering, writing, editing, and commentary. Scattered as they are throughout the land, and working at all hours around the clock, these editorial staff members would be difficult, if not impossible, to control by any central source in American society. The Russians may not believe it; but then, the Russians are suspicious even of *Pravda* and *Izvestia* (and with better reason, too). The sameness of the product, in too many instances, may be accounted for only by the identical processes of training, news assessment, and operational techniques.

The truth is, quite baldly, that whether a journalist's professional beginnings are in the print or broadcast media or in a university or college newspaper or journalism school, the root of what he learns is still based on the newsroom techniques of the newspaper. It has been so for a hundred years or more and is likely to continue, unless more great universities in the land join the few that already have pioneered in a broader journalism education that breaks cleanly with the tradition of techniques. Until this happens, the man of ideas, with only a few exceptions, will inevitably be overshadowed in journalism by both the technician and the manager. Consequently, there will continue to be more concern over form than substance in the news media as a whole, with resultant public boredom over much of the routine end product.

It will not do to blame the advertiser for this static position in the development of a consequential news report. The journalist, conveniently overlooking his own weaknesses, customarily argues that the advertiser and his powerful agencies are at the bottom of most of the ills of journalism. He is often singled out as the real culprit for the wave of press consolidations, the death of mass circulation magazines of some importance, the flourishing state of the fluffier side of television, and the relatively hard struggle that is waged by marginal magazines and newspapers of high intellectual quality.

This is quite an indictment, however, to accuse is one thing and to provide convincing proof is quite another. Certainly, as the great patron of the news media, the advertiser bears his fair share of responsibility for his part in the proceedings. But this scarcely excuses the journalists for producing so much indifferent fare for the public. No advertiser, in short, can be blamed because a newspaper is a poor shadow of what it should be. And however great the influence of advertising on television programming may be, it has less to do with the substance of news shows than the timidity of its editors. As Chet Huntley once conceded, "In our sometimes zeal for shooting film with interesting facades and lovely landscapes, and in our fear of dullness and the low rating, we arbitrarily rule out a long and imposing list of awesome subjects and conclude that they were just not meant for television and radio. What an incredible confession of weakness!" Editors in the other media, who can not hide behind lovely landscapes, could well make the same confession.

It follows that the journalist, with the obtuseness of a Brutus, too often has looked everywhere except within himself to excuse his faults. He can no longer pretend that he is a poor, raffish wretch, a hostage to uncertain fortune, to be batted this way and that by the forces that contend for primacy over him. It is an illusion that has no validity today and probably had a lot less than Upton Sinclair imagined at the turn of the century. For the journalist in the declining years of the twentieth century, despite his fluctuating influence, has won recognition as a substantial force within himself and very often is counted upon as a valued member of local, regional, and national establishments.

The Record of the News Media

Consider the record of the American news media:

The United Nation Educational, Scientific, and Cultural Organisation has reported that more newspapers, magazines, and other periodicals are published in the United States than in any other country, that the growth of American television is greater than elsewhere, and that American radio audiences are the largest on earth. The two American global news agencies, Associated Press and United Press International, are credited with having the widest domestic and foreign distribution in their field. In the American communications complex, only the film industry is said to be losing ground in the world market although American films still account for 55 per cent of all showings abroad.

As for profits, they have been substantial although there is no guarantee that this pleasant state of affairs will go on indefinitely. Television, of course, has been the most publicized beneficiary. However, prosperity also has been general among radio stations, news magazines, the newspaper groups that are geared to aggressive expansion, and the stronger newspapers everywhere regardless of size. The principal exceptions, as always, have been the chronic sick ones among metropolitan newspapers, battered by strikes and mergers, and the continuing losers elsewhere, plus some of the wavering magazines of general circulation.

The newspapers are fretting, however, over the drop of their share of total advertising due to the growth of television. Yet some profit margins have ranged from 8 to 20 per cent; indeed, one daily with 246,000 circulation was said in a recent year to have made a 19 per cent profit of $2.5 million on a gross of $13 million. The small newspapers, as Lord Thomson of Fleet said during his campaign to latch onto more of them in the United States, became his "little cash boxes." And that happy term may also cover the leaders in the overcrowded field of more than 8,000 weeklies.

For the great newspapers, profit margins have not been as large but they have continued to be substantial. *The New York Times*, for example, reported its consolidated revenues at $172,920,301 for 1966, with a consolidated net income of $9,355,469, or $4.28 per common share. The newspaper chains, for the most part, did better; moreover, most of the profitable newspaper and news magazine enterprises continued to develop educational and other sidelines in a determined move to diversify their holdings. Time, Inc., even bought the *Newark News*.

Despite this record, however, thoughtful newspaper people have continued to worry. To them and to others, it is obvious that the newspaper is confronted with the threat of greater losses of advertising to television, monumental problems of rising costs and perennial shortages of quality personnel. Actually, there is reason to believe that the period of press consolidation is now slowing down except for some of the marginal metropolitan properties and some weaker units elsewhere. In the past twenty years, it is true, many newspapers have suspended publication, but almost as many new ones have begun interesting histories. More consolidations and suspensions are to be expected, but not at the alarming rate of the period since 1950. After a long period of inertia, the leaders in the newspaper industry are beginning to stir; if their response to the technological revolution thus far has been minimal, some at last have seen new opportunities in the growth areas of the nation and tried to grasp them. That, at least, is something.

In the magazine field, too, the woes of the failures and the advertising declines have distracted attention from the prosperity in which so many have shared in the 1960s. While there were spectacular deaths in the non-news and non-picture group, most news magazines have prospered, *Newsweek*, after a long struggle, has turned the corner and shown a profit. The McGraw-Hill industrial group, headed by *Business Week*, produced a net income of $8 million in 1966, up $2 million over the previous year. But the undoubted earnings champion of the magazines has been *Time*, Inc. When the founder of news magazines, Henry R. Luce, died on February 28,1967, it was calculated that the $86,000 in borrowed capital with which he started *Time* in 1923 had increased to $690 million, of which he owned $109 million. In the decade before Luce's death, Time, Inc., (*Time, Life, Fortune* and associated ventures) had doubled its revenues and tripled its profits. In 1966 alone its report for operations disclosed record revenues of $503 million and net earnings of $37.3 million, with magazines forming some 65 per cent of the company's diversified revenues. For any realistic assessment of the financial status of news magazines, it should be noted that *Life*, the picture magazine, was the biggest earner and *Time* was second, with 3.5 million circulation and twice the gross revenues of its nearest competition, *Newsweek*.

Any consideration of the fortunes of television in general and television news, unlike that of the newspapers and news magazines, runs at once into the basic difficulty that they are not at all the same. General television, in the main, is show business with a thin layer of culture and public affairs to top it off. Television news is a merger of wire services, newsreels, theatre, and some of its own built in peculiarities which, despite an audience that reaches 35 million a night for two big programmes (Huntley-Brinkley and Cronkite), actually accounts for a comparatively small share of programming. It takes a Presidential election, a war, a visit of Pope Paul VI to the United States, or an important space shot to make television go all out with audiences that reach 150 million.

The television and radio industry, with revenues of $2.750 million annually from 773 television and 5,657 radio stations, concentrates its news efforts in the three big networks. While they have boosted their news budgets by 200 per cent in five years, the total outlay for news is not commensurate with total profits for the networks. To be fair, it should be pointed out that from 1961, when news costs of the three networks were estimated at $50 million, they went to an estimate $125 million in the Presidential year of 1964, or about 20 per cent of the total network expenditures. For 1964, with total expenses of $772.2 million, the three networks and the 15 stations they own took in $928.7 million for a pretax profit of $156.5 million. For the television industry as a whole, this profit amounted to $415.6 million before taxes based on total revenues of $1.8 billion, with 102 individual television stations showing individual profits of more than $1 million each.

Profit and Purposes

The profit outlook for television continues to be good. For 1965, the three networks and their 15 stations earned $161.6 million before taxes, which one authority estimated to be more than a 100 per cent rate of return on broadcasting property and 165 per cent on the undepreciated part of tangible broadcast property. The median revenue of profitable VHF stations for the same year was estimated at nearly $1.5 million.

There was reason, consequently, for the dissatisfaction of television people with their news coverage. 'The networks, do a first-rate job of disseminating the news," Walter Cronkite said, "but all of them have third-rate news gathering organisations. We are still basically dependent on the wire services. We have barely dipped our toe into investigative reporting." To this, David Brinkley added, "On a story like a convention...or an inauguration... something that is planned in advance...on that kind of thing, nobody can touch us. But when it comes to covering the news in any thorough and detailed way, we are just almost not in the ball game."

The deep feeling of unease among journalists was best expressed by, executive editor of *The New York Times*, when he gave this altogether realistic analysis of the position of the American press in the midst of the most prosperous period in its history:

"The criticism which embarrass us most are those which find newspapers lagging behind the general evolution of society. I'm embarrassed because I have to confess it's true.

"Healthy though the economic substructures of many, or even most individual newspapers may be, common sense tells us that unless the newspaper business as a whole evolves with evolving technology, it cannot indefinitely survive in a competitive free economy. The newspaper competes as a dispenser of information, and a purveyor of advertising, with other very efficient and alert enterprises—notably television, radio and the national news magazines... It can be conservatively predicted that unless newspapers—and this includes not only newspaper management, editorial employees, mechanical workers but everyone else associated with this great profession—unless we can intelligently and swiftly resolve the conflicts which are holding off the introduction into general newspaper use of modern automation, the newspaper as we know it today will surely decline in significance if not, indeed, eventually disappear from the scene. It will surely be and will deserve to be replaced by some other medium more in tune with modern needs.

Thus, a very considerable segment of the news media, for all its current prosperity, is approaching the limits of its power. Even without a full-blown recession, there is a point beyond which mere expansion of itself is useless unless the end product is improved. And if technology and the long range effect of the competition for the advertisers' dollar worry newspapers today, it is equally possible that they will be of even greater concern to television and the news magazines tomorrow. In journalism in an open society, always so dependent on the ability of a news organisation to maintain financial independence, nobody is likely to retain a privileged competitive position indefinitely. Big journalism is big business today, with proprietors in a constant struggle to meet rising costs, higher taxes, increasing union demands, and the intricacies of automation.

These are the symptoms of the malaise that affects the news media, but they are not the basic cause. Even if the most complicated electronic gadgets could be hooked up to the news engine tomorrow, making it completely automated, someone would still have to find and present the news which is, in effect, the fuel that makes it run. No gadget has been invented so far that can do this sensitive and difficult job, and it is unlikely that one will ever be perfected.

It is hard enough these days for a journalist to figure out sometimes what the news is and what it means without trying to programme it into a supercomputer, then test it for high and low truth content. Because, of course, there has never been any guarantee to the trustful citizen (if any there be) that the news and the truth are identical, and this goes for everything from party campaign platforms and speeches at the United Nations to a review of a new play.

This state of affairs is due in considerable part to the continued operation of the news media on the historic principle that they will distribute news of enough interest to a sufficiently large body of solvent citizens to attract advertisers, who in turn will support the organisation at given rates in order to vend their wares to its clients. If this formula has produced some news media of undoubted excellence, it is purely coincidental. The maintenance of excellence, or even common sense, is no part of the contract. Consequently, both solvent and unsolvent citizens in many metropolitan areas are asked to struggle with more undigested and unexplained facts about highly complicated matters than they can possibly absorb. However, in more isolated places, their fellow-citizens often find it difficult to keep in touch with daily events outside their immediate community.

Clearly, what is needed more than anything else is a new definition of purpose for the news media to fit the circumstances of the latter part of the twentieth century. With it, in this rapidly changing world, the citizens of this republic are entitled to a far broader and more realistic concept of news, and the explanation of the news, than most news organisations are now able to provide. It is all very well to say that the people United States are better served today by their news media than any others in the world and very probably it is true. But the evidence also indicates that the service is not good enough, that the rate of profit is generous in many instances and that the time for boldness and innovation in journalism is long overdue even if it costs a lot more to put into effect. Certainly, if we go on letting journalists use yesterday's methods to produce today's news on tomorrow's devices, we can scarcely blame a large part of the public if it ignores the whole confusing business and switches on the latest television division.

AIRING TELEVISION NEWS

Because of the additional visual content, compilation and production of a news bulletin is much more difficult in television Compared to radio it involves a much bigger production team and requires more coordinated effort. A reporting unit in radio consists of just one man who may carry with him a tape recorder. In television the reporter has with him a cameraman to take the pictures, a recordist to capture the sound and where interior locations are involved possibly a lighting assistant to help artificial illumination to ensure good quality pictures. There are of course, short cuts where the camera crew is briefed to cover stories without reporters. Moreover, development of modern equipment such as the 'cam-corder' which combines camera and recorder has made a one man band a much more practical proposition, but nevertheless he, has still to do a lot more than a radio reporter.

A television reporter with an Outside Broadcast (OB) van may have to report ad lib on camera which may be broadcast directly using microwave or satellite uplink. A radio reporter may also use a radio (OB) van but his Job is much simpler as he is not seen by the audience.

From Film to ENG: Before the rise of ENG the recording of images and sound was just like film and had to go through similar time consuming processing and editing. It was the need for mobility and miniaturization of equipment required by news programme makers that induced the light weight revolution in television. The 16 mm film replaced the 35 mm film format in the 1950s, particularly when American television teams used it successfully to cover the Korean war for about 20 years thereafter, it was 16 mm film that ruled the television news gathering scene. Some organizations did experiment with Super 8 but mainly as a way to cover such countries which did not permit normal television equipment and journalists but did not mind a toy camera on a tourist.

Use of film for television posed several problems. If something went wrong while shooting, no one could know until the film was processed, there were also chances of loss of crucial pictures during processing and also at the editing stage where one wrong decision could make irreparable loss. To minimise such hazards, better equipment and techniques like 'phase reversal' were used to reduce the time consumed in processing and editing.

Ampex began its research into magnetic tape recording for television in 1951 and by early 1956 demonstrated the quadruplex technique on a two inch wide tape. Coupled with new developments in intercontinental communication systems the development of video-tape opened a new era for television news gathering. The equipment was, however, very large and resembled an overgrown reel to reel audio recorder and with associated infrastructure could fill a small room. It was thus less manoeuvrable than even the old 35 mm equipment. But research solved this problem in the 1970s, first came the one inch high quality tape for studio work and then Sony developed U-matic tape for broadcast quality recordings. American broadcasters experimented with it and accepted it as perhaps the biggest advance in news gathering for television. It was in September 1974 that a television station in St. Louis, Missouri, "KMOX-TV" replaced its entire film equipment with ENG. By 1976 ENG started dominating the U.S. while the European networks were cautious and show in adopting the new technology.

In May 1977 the Japanese ENG coverage of the London economic summit was beamed back to Tokyo by satellite, and BBC used these pictures as part of its domestic output. BBC opened the 12 month trial of the new system on October 10, 1977 with an interview of Margaret Thatcher, then leader of the conservative Opposition. This interview was recorded at the House of Commons and shown on the lunch time news. The ITN began experimenting with ENG during April-May 1979 with the coverage of the general elections. By 1980 the switch from film to ENG was going ahead in Europe and other areas.

In India Doordarshan started colour transmission and its news services started using ENG from August 15, 1982. Using INSAT-IA Doordarshan news showed ENG pictures throughout the network on that Independence day. In the Ninth Asian Games, 1982, Doordarshan made full use of ENG and OB vans. The then

Information and Broadcasting Minister Vasant Sathe had to face strong opposition to the switchover from black and white to colour, within and outside Parliament, on the ground that the funds to be used in this process should go to anti-poverty programmes.

ENG, also known as EJ (Electronic Journalism) or ECC (Electronic Camera Coverage), has now become an universally accepted mode of television news gathering. It consists of a portable camera and a portable video-cassette machine on which picture linked together by a cable are operated separately by a cameraman and a sound recordist.

Advantage of ENG is elimination of the process department and possibility of instant reply as well as instant transmission using microwave or satellite uplink from a site far away from the base. This versatility of the ENG is highly useful in television news work and has become the order of the day. Further miniaturization of cameras is going on with further developments in CCD technology and with 1/2 and 1/4-inch formats of recording tape.

Editing Suit

With the ENG in the newsroom, most of the old style cutters which came from the film industry newsreels have vanished, and film editors have become picture editors who can handle entire range of visuals including input from ENG teams. Many reporters now prefer to edit their own visual material without the help of a professional picture editor and then write their story accordingly. Where a camera crew has gone to cover an event without reporter, the news editor or news writer will have to write the story based on what has been brought back.

In the present day editing suite, the raw material from the camera crew, the master tape or 'first generation' tape is never cut and the electronic image and sound from the video-tape are re-recorded on a fresh tape leaving the original intact. Copy from the first generation tape is the 'second generation' from which a third generation copy can be obtained. It is not advisable to telecast beyond third generation, as there is a loss of quality at each stage. Ampex has recently introduced a digital recording system where even the 20th generation is of broadcast quality.

An editing suite has two video-cassette recorders with linked speakers and monitors, one set to display the 'rushes' and the other to build up the edited story. There is also a time code generator displaying in digital clock form and a time base corrector. Editing could be 'on-line' or 'off-line'. On-line means when the editing is done from the master tape and off-line when editing is done from a copy normally on a cheaper tape and the final edited version is produced later by sing this off-line version as guide. In news and current affairs programmes most of the editing is 'on-line' as there is always a deadline pressure.

Besides picture editor, production assistant and reporter or news writer news editor are also present when the ENG output is first seen on the monitor. While the picture editor looks at it to check the quality of recording the news writer has to evaluate its content, together both of them decide the general outline and duration of various elements of the story.

Once the 'rushes' are seen and it is decided how the story has to be edited, the editing proper begins. Now the second machine, the recorder, is loaded with a fresh tape and the insert editing mode is selected. The picture editor possess 'play' on the machine containing the rushes and then pushes in the search dial into forward or reverse position to control the direction and speed of the tape while carefully looking for the first selected shot on the monitor. As soon as he gets the desired shot he stops turning the search dial and to monitor shows a single still frame. Using the search dial in 'jog' mode he slowly moves the tape forward or backward to reach the exact point at which the edit is to be made. Pressing 'in' and 'entry' buttons on the panel together makes the machine to memorize the start time of the selected shot on the player's digital tape counter, to memorize the completion of the edit, 'out' and 'entry' buttons are pressed or simply the 'top' button is pressed. The editor now turns to the recording machine using in, out, and entry/stop buttons much the same way and then he selects 'preview' which allows him to rehearse the edit. Although the picture appears on both the monitors, the actual preview is checked on the recorder monitor only. If fine adjustment by a few frames is needed it is done by using the 'trim' button.

If the picture editor is satisfied with the preview he pushes 'auto edit' to record the selected shot from the rushes to the new tape. This is known as "electronic splicing. As this first scene is recorded, the editor can go ahead for selection and recording of the other shots in the desired sequence. It is possible to check the recorded story any time by using the 'review' button.

It is immaterial in what sequence the cameraman has recorded the news event. In the edited version the first shot, normally, should be a long shot establishing the location and giving the general view of the scene. Then there should be mid-shot and then close-up of the main subject. If there is a deliberate change in this order, there must be a compelling reason or justification for this. Shots showing other participants, audience and crowds should also be shown to establish relationship between various shots and to provide variety and 'feel' of the atmosphere of the event to the viewer.

When the whole story is assembled the production assistant prepares a shot-list consisting of the details of picture, sound, and length of each shot in seconds in edited sequence. This vital information is passed on to the news writer to enable him to write the script of the story. The PA (Production Assistant) has his/her own copy for future use of the production team. It is his responsibility to keep the original and edited tapes safely and pass it on to the VTR/VCR operator at the time of the bulletin, and after the bulletin to the tape library. Other stories can also be build up on the same tape but the PA should know the order and note it down.

Television on News Writing

Just as radio-news writing evolved from newspaper writing, so television news writing evolved from radio-news. If a television news item has no pictures, the story is 'dry' and the news reader is 'in vision' or 'on camera'. Such stories are not different from radio-news items. But with the visuals things change. The basic and most essential principle is that the words and pictures should go together, the news copy should match the picture. And therefore, the news writer in television must see the visual input of the ENG with the picture editor and the final edited version before writing the story. He must have the shot list of the finally edited version to time his words accordingly.

The television news writer has to make sure that he uses words to tell the story with the help of the visuals. Depending upon the duration and content of the various shots he can write the story taking three words a second as a general guideline for time calculation. This does not mean that he should cram the script with details while the visual is being shown and thus, 30 seconds would mean 90 words. A television news writer must remember that the pictures also communicate and a picture is said to be equal to a thousand words. Words should be used to help the picture communicate, for example, a person or object in medium shot or close-up must be identified the first time he/it appears on the screen so that the viewer is not left to wonder who/what he is looking at.

The news script should supplement the picture giving additional relevant information. It should not, however, repeat in detail what the viewer can see or hear for himself. Similarly, there is no point in giving details of something which the viewer is not able to see. The best script is one which uses minimum words but with the pictures has the maximum impact.

There are some common pitfalls that a television news writer should avoid. To introduce a visual input he should not use phrases like, "Here we have.", "We are looking at…"; or "Here is…." Even the slightest difference in timing may become highly embarrassing. Words like, "The Prime Minister has this to say."; "he added."; or "Watch this scene." should be avoided as they are redundant and insult the intelligence of the viewer, after all he is clearly seeing or listening to what is being presented.

Obsession with the inverted pyramid style of news writing which is a rule in newspaper journalism creates problems in television news writing. Many who come to television from the newspapers suffer from the disease. In television you are in the 'story telling mode'. You are talking to the viewer and telling him the news. Here your story will not be shortened from behind for want of space. It will go as it is. If there is a very important development, the story may be crowded out completely to accommodate the new development' or just the intro of your story may be read out be the presenter.

Thus, the best way to write a television story is to make sure that the intro is the microcosm of the story and can stand without the visual. After the lead or intro, the television news story should be in chronological order. It should be interesting and devoid of unrelated details and in conversational language. The copy preceding the video-tape should set up and indicate the over all content of the tape but should not have the words that are coming on tape. You are telling the story, you are not presenting the proof of what you have said in the news item.

The television news writer and the bulletin editor should keep in mind why viewers switch on the news on television. They do not watch television only to get the latest news, radio perhaps does it better. They do not watch television to get all the news local, national and international the newspaper does it better. They do not see television news for depth of coverage or analysis a news magazine can do it better. Television viewers prefer the newscasts because they are taken to the scenes of action and shown what is happening or what has happened recently. Well presented stories on television should therefore be able to move the viewers more deeply than radio or newspaper. The power of television lies in its appeal to the two human senses of sight and hearing and therefore a television news writer must use both in coordination to tell the story. The script and the tape should go together and not against each other.

The news writer should take into account possible use of captions: stills, charts, graphs, maps arid the like to help communicate the content of the story effectively. While using these visual aids the news writer should be in constant touch with the graphic artist or caption designer and should make sure that he has what he wants. All networks can cite a faux pas/where a wrong still or graphic spoilt the show. Doordarshan once showed a photograph of a living Member of Parliament while reporting the death of another. The correct picture was selected from a Lok Sabha publication and passed on to the graphics department for mounting it on a caption card. On the other side of the page, was a photograph of another M.P. who looked older than the who died. The man who finally mounted the photograph on the caption card took this into account and corrected God's 'mistake' leading to a disaster in the bulletin.

Stand-upper

A reporter at a news site can send the newsroom what is called 'piece to camera' or 'stand-upper'. Here the reporter can be seen telling the story from the site. This kind of presentation immediately establishes the reporter's presence on the spot and he tells the story straight to the camera and through it to the viewer. The difficulty is that some reporters can do this easily while others can never, do it well. The latter should know how to write spoken language on a small note and try to memorize this as far as possible. It is not necessary to memorize a very long 'piece-to-camera' but for many even a small piece is difficult. Nowadays, portable electronic promoters are available to deal with this problem. Otherwise, the best way is to memorize the intro and then look at the notebook occasionally speaking one or two sentences directly to the camera.

There is something important about the framing of this type of story by the cameraman on location from where it should be given, the reporter should not stand against a wall or such other background unless it is relevant to the story. It will look like a dry from somewhere. Preferably, the reporter should be seen at the scene of the event itself and should also include something visible in the frame to that effect. Ideally, the reporter should be seen in the proximity of the most important action elements of the story being covered, not in the centre of the frame but on one side so that he appears a part of the action and not a superim position on it.

Studio Spot

A 'studio spot' is similar to a 'piece-to-camera' but takes place within the studio, where somebody other than the news reader comes in vision and presents a story with the help of visuals including stills, film or VCR. A reporter or specialist can be asked to do it where he can deal with a running story taking latest information up to the beginning of the bulletin. Unlike a 'piece-to-camera', the person presenting the studio spot has all the comforts of the studio including graphic aids and prompter.

Besides these, the bulletin can also include live or recorded interviews, and networks can put on live reports from OB vans and other stations near the event. Doordarshan demonstrated this capability on February 29, 1988 when the budget was being presented in the Parliament; the viewers had the benefit of simultaneous commentary and discussion by two groups of experts in the Doordarshan studios one of which included the Reserve Bank Governor and another the Chief Economic Advisor to the Government of India. An OB van was giving the details of announcements from a loud speaker placed outside Lok Sabha, as cameras are not allowed inside. A reporter was waiting for the reactions of important MPs and Ministers and they came out from the Lok Sabha chamber. Another OB van at the Bombay Stock Exchange was showing the activity there, while a reporter discussed the impact of the budget with businessmen and experts. Madras was also linked to Delhi, and reporters were seen talking to trade union leaders and other interested groups in that city. The team presenting the programme was also receiving phone calls from the public with questions and comments for the experts.

Foreign Coverage

Covering foreign assignments needs a lot more coordination. In most cases editing facilities are availed of from local contracts but at times this equipment is also carried. Stringers or staffers posted in a foreign land have better local contacts and have arrangements for editing and sending the tape back to the home base. But if a camera crew goes to a foreign land to cover a big event co-ordination becomes rather difficult. If an event is planned in advance normally a senior member of the staff is sent in advance to work as 'fixer' and as the entire team arrives he has already laid down the rules of the game. The 'fixer' is in touch with the headquarters and feeds them the available facilities and required staff and equipment. Sometimes services of a local 'fixer' are also availed.

The most important consideration of a television news team is the arrangement to send the story back home before the, deadline. Depending on the distance and the availability of flights the videotape can be sent to the headquarters by air. Details should be communicated by phone or telex to the home base for speedy clearance at the airport. Sometimes the tape is hand carried by a member of the air crew or cabin staff and sometimes by a willing passenger sometimes referred to as 'pigeon'. In this case, besides informing the newsroom the details of the 'pigeon' and his flight, it is advisable that the 'pigeon' should be armed with the telephone numbers of the newsroom so that in case of a communication gap between the news crew and the headquarters he can contact the newsroom on reaching the destination. Some Government owned networks can even use the diplomatic bag for transporting the tape back home. In some cases a member of the team flies back with the tape.

More and more television news crews now transit their stories via satellite. Depending upon the bulletin deadline, satellite time is booked, keeping enough margin for processing before the bulletin so that the 'feed' from the crew should land on time.

But it is not always that a network will send its own crew to cover stories, since costs are prohibitive. Therefore most of them also subscribe to international news film agencies and are members of regional news exchange networks.

Visnews is the biggest television news agency which began as British commonwealth International News Film Agency in 1957. It is owned by the Reuters, the BBC and several Commonwealth broadcasting organisations, and provides a daily service of news and sports by video-cassette or via satellite to more than 400 broadcasting stations. With its headquarters in London Vastness is involved in Bright star, a permanent satellite link between Britain and the United States. ABC of the US is negotiating to buy a substantial portion of Vastness to cut its own news gathering costs and to sell its news to overseas subscribers of Vastness.

Worldwide, Television News (WTN), formerly UPITN was established as a partnership between the Television Department of the United Press International and the Independent Television News (ITN) of London. It is now owned by ITN, ABC of the US and the Nines Network of Australia. It supplies news and features to broadcasters in over 100 countries.

Eurovision News Exchanges (EVEN) The West European system, European Broadcasting Union (EBU) operates Eurovision News Exchange. It started in May 1961. Its technical centre is in Brussels through which items are exchanged thrice a day at fixed times. The administrative centre is in Geneva. There is also an office in New York which was opened in 1970 to coordinate satellite transmissions between North America and Europe.

Intervision News Exchange (IVN) was set up in May 1964; within the Prague based International Radio and Television Organisation (OIRT). Member countries of the Intervision News Exchange include Bulgaria, Czechoslovakia, Cuba, East Germany, Poland, and Soviet Union with Japan, Algeria, Afghanistan and Vietnam among other participants. Finland. belongs to both IVN and EVN. It uses Intersputnik Satellite for distribution of material.

Service Ibero-americana de Noticias (SIN) of the OTI (Organisation de la Television Ibero-americana) was started in 1971. Participants included television organisations on both the sides of the Atlantic with Spanish television (TVE) playing the co-coordinating role. This serves as a link between some Latin American television networks and the European networks of Spain and Portugal and cooperates with EVN also.

Asiavision: born on January 16, 1984, the Asiavision News Exchange operates as two interconnected zones. Zone A includes CCTV (China), IRIB (Iran), KBS (South Korea), MBC (South Korea), NHK (Japan), and TVRI (Indonesia). Zone B includes BTV (Bangladesh), DDI (India), PTV (Pakistan), RTV (Brunei), RTM (Malaysia), SLRC (Sri Lanka) and TVRI (Indonesia). While TVRI is member of both the zones NHK of Japan and RTM of Malaysia are the co-ordination centres of Zone A and Zone B respectively. IT exchanges items with EVN also. Between January-September 1985, for example, the exchange included 908 items from Zone A, 1955 items from Zone B (DDI-511) while 1450 EVN items distributed were by Asiavision.

Television newsrooms invariably subscribe to news agency wires also. Besides some news agencies also have their TV wings. For example, PTI and UNI in India also supply visual stories to Doordarshan which is a member of Asiavision Zone B and also subscribes to Vastness. Doordarshan also gets Pool copy from the GNR of All India Radio just as BBC Television gets the BBC General News Service (GNS).

Preparing a Bulletin

Planning for news bulletins is a continuous process. There are a few regular meetings of the news staff everyday, while other informal urgent meetings of the news staff everyday, while other informal urgent meetings may be required to sort out various contingencies. Information about forthcoming events which the network may like to cover keep coming to the television just as in case of other media. Planned stories are assigned in advance to reporters and camera crew. Some stories are assigned in advance to reporters and camera crew. Some stories are research based and therefore each network has some research staff to look up references and to trace the relevant visual material from the tape library or other sources. Some stories may require studio recordings and therefore the production assistant concerned has to book studio for the purpose in advance.

There are some 'fire brigade' operations. While looking at the teleprinter the day producer may come to know of an accident or some unusually event and feels that his ENG team could shoot the story before the bulletin. One or two ENG teams are always kept on emergency duty and these are rushed to the spot. If the event is very important and requires a bigger operation, then an OB van can also be sent along with one or two reporters who may even ad lib the story during the bulletin or may arrange live interview.

About two hours before the bulletin a rough shape of the bulletin is decided in the 'running order' or 'run down'. This is a list of the sequence of the stories which are to be transmitted and contains the details of various elements of each story with the time required to transmit it. The running order is slowly complied as the details of each story reach the news editor. Each sheet of the bulletin script has its running order number. No 1 being the headlines. The second sheet which may contain the lead story of the day will not be placed at No. 2 but with some gap in the running order so that if some bigger story lands from the teleprinter it can be accommodated in the bulletin before the present lead. Similarly there are gaps after each story or group of stories so that if some related item comes it can be accommodated at a proper spot in the running order.

For clarity, a bulletin script is typewriters with a bigger typeface and the spacing is double or triple for the convenience of the newsreader or presenter. The newsreader, the producer (director) and the production assistant keep on getting their copies as the script of each story is finalized and each of them marks the script according to the role he or she has in the production of the bulletin. The presenter or newsreader marks for the pauses while reading the script, and checks pronunciation of proper names and sometime writes it in his/her own hand. If there are any difficult words in the copy he can request the news editor to change them. While rehearsing the newsreader can also point out if a sentence is not clear in meaning.

The production assistant also marks the script according to his role of giving cues, and stand by commands. Similar markings are there on the producer's copy. These markings indicate the source of tape or still or graphic, duration, exact word when the command should be given to time it perfectly, counting the possible reaction time.

Digital special effects generators like Zeno and systems like Paint box have changed the look of news bulletins in many countries. Creation of windows where a visual could appear before the roll command and can fly in and fly out through Zeno eliminates the fear of a blank screen. Similarly a still can appear on a window and when require can fill the screen and then can fly out and leave the presenter on the screen. A copy of the script also goes to the Teleprompter operator where it can be seen by the newsreader while looking at the camera. The speed of the Teleprompter can be controlled by the newsreader from his/her seat.

In computerised news rooms, the final running order and the final script is printed out minutes before transmission. However, all the members of the production team can see the progress of the script using the VDTs (Video Display Terminals) and make their own contributions to the script through these.

Example of a Doordarshan Bulletin

Let us have a look at the script of a major Doordarshan bulletin. Each page has the initials of the editor and the stenographer, the time of the bulletin, and the date. There is also the running order number which indicates where the story will be telecast in relation to other stories in the bulletin. These indications and the slug are not read by the newsreader.

Good Evening

The Headlines

The Peace Keeping Force in Sri Lanka resumed operations to recover arms and ammunitions.

Government informed the Lok Sabha that negotiations with Union Carbide for seeking compensation for Bhopal gas victims to continue under the umbrella of the court.

In Nagaland assembly elections, the remaining three results go in favour of the Congress (I).

The U.S. and the Soviet Foreign Ministers hold talks in Geneva on the today to ban medium range nuclear missiles.

Reports of two ships being attacked by Iranian gun boats in the Straits of Hormuz.

And, in SAF games India continue to dominate the medal tally.

Sri Lanka—PKF

In Sri Lanka, the Peace Keeping Force resumed operations to recover arms and ammunition after a gap of 48 hours this morning. An official spokesman said in New Delhi that this has been done in the absence of any positive response to the offer made by the Minister of State for External Affairs, Mr. Natwar Singh in Parliament on Friday. He regretted that the LTTE did not respond to the offer and is now insisting on a number of unacceptable pre-conditions prior to the consideration of laying down arms. The spokesman said that during the period since the announcement, that the PKF will not fire on its own, the LTTE has been threatening to kill people assisting and supporting PKF. LTTE had also put out posters at various places saying that the Indian Red Cross should stop functioning and government offices and banks should not open.

In reply to a question the spokesman said there is no question of any discussion with LTTE under conditions other than those announced by Mr. Natwar Singh in Parliament.

Meanwhile, curfew relaxation in Jaffna has been extended from 8 to 12 hours since Saturday. In Chunakam also shops have opened and local policemen have reported on duty. Air taxi services between Play and Coulomb have also been resumed.

Casualties-PKF

Two hundred and sixty two PKF personnel have been killed and 927 wounded during the operation in Sri Lanka till today. A press release issued by the Defence Ministry says that over 40 per cent of the wounded have been discharged from the hospitals. The press release refers to the highly exaggerated casualty figures published in a section of the press, and says that the publication of such exaggerated reports causes great concern and mental agony to the families of those serving the PKF. It also adversely affects the morale of the troops. The release also expresses regret that on a matter involving casualties of the Peace Keeping Force, the press should indulge in speculative reporting.

Ryzhkov

The visiting Soviet Prime Minister Mr. Nikolai Ryzhkov and Mrs. Ryzhkov visited Bhillai today. The Bhillai Steel Plant has been set up with Soviet help here decades ago. The visiting dignitaries accompanied by the Chief Minister of Madhya Pradesh and Union Minister for Steel and Mines Mr. Fotedar visited various units of the plant. The Soviet Prime Minister and his wife who are both engineers evinced keen interest in the plant. They visited the blast furnace which was commissioned only last month. Later they also went to the rolling mail where the widest steel plates are made in India. The 3600 mm plate mill so called to signify the length of its rolling barrel has the latest manufacturing techniques.

(*Hold*)

The Soviet Prime Minister Addressed a workers meeting where he reiterated his country's commitment to further strengthen bilateral relations with India. He also coveted greetings to the workers from the Soviet leader Mr. Gorbachev.

(*Hold*)

Czech Delegation

The visiting Czechoslovakia Parliamentary delegation watched the proceedings of both the Houses of Parliament today. They were warmly greeted by the Speaker of the Lok Sabha, Mr. Balram Jakhar when they called on him. The six member delegation is led by the Chairman of the Federal Assembly of Czechoslovakia, Mr. Alve Indira.

(*Hold*)

The delegation held discussions with various members of Parliament.

(*Hold*)

In the evening the delegation called on the Vice-president and the Chairman of Rajya Sabha Dr. Shankar Dayal Sharma. Dr Sharma wished them a fruitful stay in India.

(*Hold*)

Earlier the visiting delegation met the Parliamentary Affairs Minister Mr. H.K.L. Bhagat.

(*Hold*)

Lok Sabha : Bhopal Gas

The Industry Minister, Mr. Vengal Rao told Lok Sabha today that negotiations are underway with the Union Carbide Corporation to secure compensation for the Bhopal gas victims, and these would continue under the umbrella of the Court. He, however, did not elaborate saying that the matter is sub-judice. The minister was replying to a special discussion on the reported negotiations between the Government and the Union Carbide for an out of court settlement in regard to payment of compensation for the victims of the Bhopal gas tragedy. Mr. Vengal Rao assured the House that no efforts will be spared to secure compensation for the gas victims and their interests will be fully protected. Not satisfied with the Minister's reply, most of the opposition members present in the House staged a walk-out.

Earlier members from both the sides urged the Government not to have any out of court settlements regarding the payment of compensation to the victims of the Bhopal gas tragedy. Replying to the questions, the Minister said that the Government has spent about fifty four crore rupees on the relief operations for the gas tragedy victims. He said, the Government has rejected as mere pittance a sum of twenty one million rupees offered by the Union Carbide as interim for the rehabilitation of the victims. The State Government is finalizing a long term plan in this regard.

Art Exhibition

Art born of the October Revolution was the theme of the Soviet Exhibition that opened in New Delhi today as part of the festival of the USSR in India.

The exhibition was inaugurated by Soviet Minister of Culture, Mr. V.G. Zakharov. The Human Resource Development Minister, Mr. P.V. Narasimha Rao was present.

The exhibition traces the course of development of the Soviet visual arts in the fifteen Republics of the USSR. In the post revolution period the Soviet art has been inspired by the slogans of Lenin that art belongs to the people.

(*Hold*)

Calling Attention

The Industry Minister, Mr. Vengal Rao assured the Lok Sabha today, that the Government will do it best to help the workers of the two units of ACC-Babcock Limited at Shabahad in Karnataka, and Durgapur in West Bengal. Both the units involved in the manufacture of boilers for the power sector have been closed and workers laid off. The matter was raised through a calling attention notice, by Mr. Virendra Patil, Congress (I) and others in the House today. During the discussion, members expressed concern over the closure of the units and urged the Government to take necessary steps to revive the company and rehabilitate the workers. The Minister said that the matter will be taken up with the Cabinet soon. The Secretaries' Committee has already examined the matter.

Sathe

The 54th International Foundry Congress is currently on the Capital. Over five hundred delegates from all over the world are attending the Congress.

The Energy Minister Mr. Vasant Sathe inaugurated the conference this morning. In his inaugural address Mr. Sathe said that India is trying to catch up with the international developments in foundry. He said India has a rich history of foundry which dates back to the Mohen Jodaro and Harappan period.

(*Hold*)

Mr. Sathe released an international directory of foundry on the occasion.

(*Hold*)

Final Results

In Nagaland, all the remaining three results have gone to the Congress (I) raising its strength to 34 in the sixty-member State assembly. In the LQNGLENG constituency, former Speaker, Mr. CHENLOM PHOME, defeated his nearest independent rival, Mr. HEONG by 488 votes. The Former Minister, Mr. BANJAK PHOM, was elected from TAMLU. He defeated Mr. H. NYEMLI of the NNDP by 251 votes. The last results from KORIDANG has also gone in favour of the party with its candidate Mr. OKZENKETBA defeating his independent rival Mr. BENDANGTOSHI by 519 votes.

(*Hold*)

Portfolio

Meanwhile, the portfolios of the members of the newly constituted Hokishe Sema ministry have been announced. The Chief Minister will hold home, General Administration, Finance, Revenue, Food and Civil supplies.

PM-Greetings

Mr. Rajiv Gandhi has congratulated the Nagaland Chief Minister on the victory in the Assembly elections. In his message Mr. Gandhi said that the victory is a vindication of the policies of the Congress-I. He said that the party is determined to spare no efforts for the welfare and uplift of the people of Nagaland.

Biswas

The mortal remains of noted Bengali folk singer and lyricist Hemanga Biswas were cremated in Calcutta today. He died in Calcutta last night after long illness. He was 75. Many film personalities were among others who attended the funeral.

Born in District silhouette now in Bangladesh, Hemanga Biswas joined the freedom movement in 1930s. He was also associated with the Indian Peopled Theatre Association.

Price Situation

Members of Rajya Sabha today urged the Government to take urgent strong measures to check the rising prices. They were participating in a discussion initiated by Mr. N.E. Balram, CPI. He said the main reason for inflation has been the wrong economic policies of the Government. A ruling party Member said inflation has been a worldwide phenomena but in India it is less in comparison to other developing nations. The debate is to continue.

Visitors

In the Lok Sabha today, a person from the visitor's gallery tried to raise slogans of Uttarakhand during the question hour. He was immediately nabbed by the watch and ward staff. Investigation is on to identify the person.

Disarmament

The US Secretary of State Mr. Shultz and the Soviet Foreign Minister Mr. Shevardnadze had their first round of talks in Geneva today on some operational details of a treaty to ban medium range nuclear missiles. The two have set aside two days for the talks. Their aim is to have the treaty ready for President Reagan and Mr. Gorbachev to sign in Washington at their summit on the 9th of next month. High level arms control aides are assisting them in their deliberations.

Bangladesh

In Bangladesh, shops opened in the capital Dacca and the traffic was back on the road after the extended general strike ended at 2 p.m. today. Agency reports say para-military police in trucks mounted with machine guns continued to petrol the city's main streets. The liaison committee of the opposition alliances sponsoring the strike has announced that the strike would continue tomorrow also for eight hours. They are demanding the resignation of the Government.

The reports say that earlier in the day riot police broke up an opposition rally of two thousand supporters of the Bangladesh Nationalist party. The rally was held to protest against the government's ban on newspapers publishing statements and photographs relating to violence during the strike. A BBC correspondent was arrested under the Special Powers Act.

Gulf

Reports from the Gulf say Iranian boats have attacked two more ships in the Straits of Hormuz. The Iranian frigates are reported to have approached the ships for inspection of their cargo, but were not allowed to do so. One of the two ships belonged to Taiwan and was flying a Panamanian flag. The ship caught fire after it was hit by rocket propelled grenades. The other ship was flying a Rumanian flag. Three of its crew members are said to have been injured.

GCC

The Gulf Cooperation Council countries will increase defence cooperation among their members in view of the recent escalation of war in the Gulf region. This was decided at the two day, conference of Defence Ministers from six GCC countries, The UAE, Saudi Arabia, Qatar, Baharain, Oman and Kuwait. The statement issued at the end of the conference says that the member countries have decided to ensure collective action to face any threat to their security. The recommendations of the Ministers will now be places before the forthcoming summit of the GCC countries beginning on the 26th of next month.

Festival-Sports

A spectacular presentation by Soviet gymnasts marked the opening of the sports programme as part of the Festival of the USSR in New Delhi this morning.

The show was inaugurated by the Chairman of the Soviet Sports committee, Mr. M.N. Gramov while the Minister of State for Youth Affairs and sports Mrs. Margaret Alva was the chief guest.

Presentation of floor exercises and breath taking acrobats kept the large gathering in the Indira Gandhi Stadium spell-bound for about an hour and a half.

(*Hold*)

SAF Games

India continued to dominate in the medals tally in the South Asian Federation SAF Games at Calcutta. They have so far claimed 23 golds.

Annavi of India claimed the gold when he leaped to 2.15 meters in the Men's high Jump event.

Indies Golden Girl, P.T. Usha won the 400 meters Women's hurdles. She clocked 57.8 seconds below her personal best.

Others who own gold for India are : Surjit Singh in discus, Budhwa Oraon in the 800 meters for Men, Suman Rawat in the 1500 metres spirit, Sunny Joseph in the 100 metres sprint, Razia Sheikh in the Women's Javelin, Tara Singh in the Men's 10,000 metres and S.S. Talwar in Pole Vault.

SAF Games (Contd…2)

Mohammed Saha Alam gave Bangladesh its first Gold Medal clinching the 100 metres sprint for men. He clocked 10.79 seconds.

In the swimming pool, Wilson Cherian of India created a new meet record in the 200 metres back stroke event. He claimed the gold clocking 2 minutes 7.92 seconds. Silver went to Surjit Ghose of India and Dim Islam claimed the bronze.

Julin Boiling of Sri Lanka created meet record in the 200 metres free style event. He clocked 2 minutes 2.92 seconds. The silver went to Sanjib Chakrabarty and the bronze to P. Sal Kumar, both from India. Niyati Roy of India has won the Women's Singles Title in the Table Tennis event in the south Asian Federation Games. She beat Varsha Chulani also of India in straight sets 21-12, 22-20, 21-12.

Brijesh Patel

Brijesh Patel of Karnataka today set a new record of the highest number of runs in the history of Ranji Trophy. He established the record in the Ranji Trophy match between Karnataka and Goa at Gulbarga today, when he scored 144 to take his total to 6,674 runs, and break the old record held by Ashok Mankad of Bombay. He now has 24 centuries which is also a Ranji Trophy record.

Aging

A two day National symposium on Aging began in Bombay today, to focus on the specific problems of the aged. The symposium will make positive recommendations to the Government towards framing the national policy. The symposium was inaugurated by Mr. David Hobman, President, International Federation on aging.

In his welcome address, the chairman of the Indian Committee on Aging, Mr. S.D. Gokhale said, that aged people should not be put in homes,. He emphasized on evolving a new approach for the service of our senior citizens. One in every fifteen Indians is above the age of sixty. Most of them are still capable of contributing significantly to society.

Film

The Indian film "SWAMI" has been adjudged the best children's feature film at the Fifth International Children Film Festival at Bhuwaneshwar. It won the Golden elephant Award. Child artistic Manju Nath was chosen the best actor. The awards were announced at a glittering function at the end of the 11-day festival this evening.

Carpet Exhibition

An exhibition of soviet carpets began in New Delhi today.

It was inaugurated by the Minister of Textiles Mr. Ram Niwas Mirdha.

(*Hold*)

The carpets were designed by Soviet designer, Mr. K. Aliev.

(*Hold*)

Weather

And Now a Look at the Weather

INSAT-1B picture shows scattered convective clouds over Kerala, coastal Tamil Nadu and South Coastal Andhra Pradesh.

The Forecast : Rain or thunder showers are likely to be scattered over Coastal Andhra Pradesh, Tamil Nadu, South Interior Karnataka, Kerala and Lakshadweep. It is likely to be isolated over Andaman and Nicobar Islands and Coastal and North Interior Karnataka.

The temperatures, recorded at four major cities are:

State	*Max. Temp.*	*Min. Temp.*
Delhi	29.5	09.7
Calcutta	29.3	17.4
Madras	30.0	24.0
Bombay	33.3	23.4

This is a bulletin which has been presented by one newsreader or presenter. When the bulletin is represented by two newsreader, the script has to identify who is presenting what. 'Hold' indicates that the newsreader has to stop here and wait for cue to read the next sentence as a VCR/VTR is being rolled or telecine is putting out something.

Though a map has been used in the lead story on Sri Lanka it could have filled only 3 to 5 seconds. The ENG team could have recorded the official spokesman with the key announcement. Some file shots of the deployment of the PKF could have been used if fresh material from Jaffna or Colombo was not available.

Indian Parliament does not allow photography inside and this would have been good excuse for having the Bhopal gas story dry. But nobody could have stopped the producer from using file shots of the tragedy and rehabilitation measures.

Items related to Nagaland elections and the new cabinet there have all gone 'dry'. File shots of elections in Nagaland, still of the Chief Minister and a table showing the party position could have been shown without difficulty. Efforts should have been made to have some ENG material from Nagaland as the election and the formation of the new ministry was not an accident that occurred on the day of the bulletin.

Price situation', 'Visitors', 'Disarmament' are good examples of bad copy and wrong placement in the running order. The visitor who raised slogans must have been released when the bulletin was being telecast. The source of this story was a news agency item in the afternoon and perhaps nobody from the TV newsroom checked what happened to the man later. Price Situation and Disarmament both deserve better treatment which would not have been difficult if the effort had been made. Presentation of weather by Doordarshan has been improved a lot since then with the use of Paint Box.

The newsreader or presenter should remember that he or she is being watched by viewers and should take care that the appearance on the screen should go with content of the item. This means, for example, that while reporting death or accident, the presenter should not look cheerful, and similarly while reporting a happy development the presenter should not look gloomy. The news editor should take care that the last item should never be a sad news because most of the newsreader cannot control the smile of relief that comes naturally as the bulletin ends. Even in radio people can note emotion in the newsreaders voice, it is more so in television where they can see the presenter. Only may say that it involves acting. Yes, but presenters are after all television stars.

Computer graphics and digital video effects can help better presentation and production. However, while using them the producer should always remember that he is presenting news and not a magic or pop show.

At the outset it is important to know that news as it put out on television has to be treated altogether differently as compared to the news on any other mass medium. For one thing, the news is being presented. For another, the demand for visuals is considerably high, requiring constant and course updating.

The news bulletin is a major area of programming for a television station. It is telecast live and thus has to be made error-free. News may be any item of importance that takes place in a certain locality, something unusual, something that interests us, or concerns us. The classic definition. "When a dog bites a man, that is not news because it happens too often, but if a man bites a dog, that is news." The aphorism has remained alive because it dramatically states the enduring value of novelty to the news business: while the news is fundamentally the same in any medium newspapers, radio or television yet the presentation of news differs in all the three media owing to special characteristics; stories for the broadcast media generally are shorter than those for the print; time is to radio/television what space is to a newspaper; the newspaper's space is expandable, but broadcast time is not; the length of a news broadcast severely restricts the number of news items that can be incorporated into the broadcast bulletin; time limitations force broadcast persons to be highly selective in the stories meant for inclusion in news bulletins. That is why news for broadcast media is covered with extreme brevity as compared with the newspaper coverage; the broadcast stories must be concise and intelligible because the listen/ viewer has only one chance to grasp the meaning. He or she cannot go back to the story the way a newspaper reader can. Therefore, stories written for broadcast must be conversational and easy to comprehend. Good broadcast copy must be easy on the ears. The rule is: write like you are telling a friend. The evolution from the newspaper style to conversational broadcast style has been a natural transition; the old newspaper rule of including five Ws and one H in the first paragraph of a story does not necessarily apply to broadcast news. To write clear news copy for broadcast you must. remember to determine what is important in the story. Does the story lie in what happened? Or is it who it happened to? Or, perhaps how it happened? Or, is it what is happening or who will become involved? These questions must be answered in your mind before you can write a broadcast news story.

Television news style evolved gradually. While the stories for TV news must also be shorter and conversational, just as in case of radio-news, the rule is to write in a conversational style for pictures. When writing for television, the pauses necessary to coordinate words with visuals are taken into consideration. Writing is often geared to the available pictures of the event. The words omit what the pictures show and tell what the pictures omit. Because of the visual element, the TV news show tends to favour news stories which can be reported with pictures to news on which no picture is available.

Basic Rules of Television

The newspapers are printed for the eye; the TV news story is presented for both eye and ear; while radio-news is meant to appeal to the ear. The golden rule for TV news is: write like you talk, not like you write. To communicate information it must speak in simple language most viewers would understand. The following rules must be remembered in writing the news for television.

Clarity: The first rule of TV news is that the story must be clear at once. Unlike the reader, the viewer has no second chance to go over the material. TV news is written on the wind here for instant, gone the next moment.

A viewer left wondering about the meaning of what has been said at the beginning of a sentence will probably be too distracted to comprehend what is being said at the end of it.

Just as the person who writes science articles for a popular magazine must be able to translate complicated scientific jargon into the general reader's language, the writer of TV news must be able to make complicated stories simple. In short, understanding must be immediate in the TV News Bulletin. The golden rule to follow is "never underestimate the viewers' intelligence or over-estimate their knowledge."

Brevity: Clarity comes not only form writing simple sentences but also from writing short ones. Long sentences cannot be read easily by the newscaster, and a viewer has a hard time following them. Every sentence that you write for broadcast should be short, simple and easy to understand.

The average acceptable number of words per sentence in a TV copy is 13 to 14. TV news has been described as a headlines services. It is intended to give the viewer only an outline of the event. In short, there are more words in a traffic accident news item in a newspaper than there are in the entire TV news bulletin.

To facilitate the usage of small words in the TV news bulletin, the Easy Listening Formula (ELF) has been devised after an analysis of numerous broadcast scripts. This formula, simply put, goes like this: In any sentence, count each syllable above one per word. Take a second look at any sentence scoring above 20. It may be perfectly clear, but chances are it can be improved by trimming adjectives or adverbs, extracting clauses or simply dividing into two sentences.

- A one-syllable word is not counted: hat, check, give.
- A two-syllable word counts one: bowler, grabbing, hostess.
- A three-syllable word counts two: radio, distributes, beautiful, misery.
- A four-syllable word counts three: democracy, implausible, conscientious and so forth.

Excess syllables represent waste. A one-syllable word is always better than a two-syllable word, if it says what you want to say. And a two-syllable word is much better than a four-syllable word when it serves the purpose. Often you can save time by using:

FIRST	for	'initial'
BEAT	for	'defeat'
BUY	for	'purpose'
END	for	'conclude'
SURE	for	'certain'

TRY	for	'attempt'
URGE	for	'persuade'

One syllable words are often either familiar verbs, pronouns, function words (the "glue" words which hold content words together), or concrete nouns.

Long words such as capitalism, totalitarianism, communication, psychotherapy often communicate abstract ideas. In writing news for TV, we can not always escape long words. To get a difficult idea across, we should do it in as simple a manner as possible.

Conversational: TV news writers use everyday words: the language of conversation TV journalists use a vocabulary that corresponds to the one used in daily news for television. Take this story written as per newspaper style:

"The vice-president of the New York branch of the Red Cross stated in a press conference today that many Christmas toys can inflict injury upon unsuspecting youngsters."

That is not exactly conversational. Instead, a TV journalist would write:

"A Red Cross official warns that many Christmas toys can be dangerous for kids."

The following is the partial list of words that are generally too formal for TV news with conversational alternatives.

Formal	*Conversational*
slate	schedule
passed away	died
bar	prevent
reside	live
residence	home
nab	catch
altercation	argument
mum	quiet
prior to	before
indisposed	sick, ill

Most of the words in the "formal" column also take longer to say, thereby "wasting time, On the other hand, conversational words are short commonly used words and therefore communicate easily. Words that we might succeed in deciphering in a newspaper or book are much more difficult to comprehend when we listen to them.

Time Reference—Present Tense: The element of immediacy is one of the biggest assets of the TV medium in reporting news. Every effort should be made to include up-to-date reports and to write copy in a manner that sounds fresh and timely. With this in view, the present tense is encouraged.

The present tense is the most engaging tense in the language. It indicates that the action is still going. It conveys currency of the news. It is more appropriate to phrase a sentence as, "There is a huge fire in the old city", than, "there was a huge fire in the old city."

The dynamic nature of news is better carried in copy that incorporates the present tense. Here are a few illustrative sentences:

Iraq announces that it accepts the UN proposal for a cease fire in West Asia.

or

The Chinese have test-fired another hydrogen bomb.

There are many situations, nevertheless, where the present tense does not work:

The bridge collapses.

or

Two people are being shot.

Actions that belong to moments in the recent past cannot be forcibly dragged into the present that bridge is not collapsing now.

However, maintain an air of immediately while describing actions that have ended.

The bridge has collapsed.

or

Two people have been shot.

The present perfect is less dated than the past tense and is used in situations in.

Which the present tense is unacceptable:

A constable has been arrested for impersonating as a magistrate.

There can be situations in which neither the present nor the present perfect tense are acceptable:

(*i*) Few people *have shown up* at the meeting, so it broke up early, or
(*ii*) Two people *have been shot* earlier today.

In these, situations, it is necessary to fall back on the past tense.

(*i*) Few people *showed up* at the meeting, so it broke up early, or
(*ii*) Two people *were shot* earlier today.

Do not say "today" when the story broke yesterday. Such practice can prove embarrassing. Be resourceful. Update the story. Move it into the present by highlighting a new fact. In such a situation, it is perfectly proper to conceal the time in case the time element is not of consequence. For example, if it is mid-afternoon and you are using a statement that the British Prime Minister made the preceding night, it is not necessary to say:

Last night the British Prime Minister, Mr. John Major, issued a strong statement condemning terrorist violence in Punjab and Kashmir.

What is newsworthy here is the British Prime Minister's condemnation of terrorism and not so much the time element. So, the sentence should read as:

British Prime Minister John Major has condemned terrorist violence in Punjab and Kashmir.

The time, element can be mentioned later in the story when more details are mentioned.

Active Voice

Avoid the passive voice; it is the voice in which the subject is acted upon. Use instead the active voice where the subject acts upon the object.

Passive voice: An airliner was hit by a private plane.

Active voice: A private plane crashed into an airliner.

Active voice is clearer, packs more punch and uses fewer words.

Weak: The policeman suddenly took away the gun.

Better: The policeman snatched the gun.

It is important to keep the action in the verb. The active voice is stronger than the passive voice.

Weak: The building was destroyed by the fire.

Better: The fire destroyed the building.

Basic News Scripts in TV

You must have by now understood the main difference in writing news for television and other mass media as indicated in the earlier section. In addition, TV news should contain some extra qualities to give it a distinct flavour to suit the medium. We shall enumerate these qualities here.

(*a*) *Talking Heads:* The most skeletal news story is a 'reader', or 'liner'. This is a story read on camera by one of the newscasters with no visual appearing on the screen. True stories not supported by visuals generally have no place in the television medium. Such a story could have been written for radio. The only difference is that, on television, you see the face of a newscaster. Still, this story may find its way into the news bulletin because there are occasions when no visuals are available especially on out of town stories, or in the case of a story that broke late, making it impossible to get relevant footage on/the air. Also, some particularly complex stories may be better understood without the added distraction of visuals.

(*b*) *Super:* 'Supers' too are also important elements to every story with video in it. 'Supers' are names or other bits of information superimposed on the TV screen. Also called IDs, they identify or explain a person, thing, place or picture. For instance, they are used to identify the newscasters by supering their names on their images.

(*c*) *Voice-over (VO):* Visually, the stop head of lack lustre 'talking head' presentation is to have a talking head plus a visual. A visual may be a photograph, chart, map or graph. It is used to illustrate a story, identify a place, or simplify a complex economic news items say with the use of a graph. The narration continues over the visuals.

Apart from static visuals like graphics, illustrations, etc., the voiceover is also carried on video footage of for example a plane crash on a mountain summit, or riot hit areas. Shortly after the newscaster begins a story on camera, video coverage appears on the screen while the newscaster continues to read.

(*d*) *Sound-bite:* A sound bite, or 'cold bite' is a type of story that includes no video-tape of the story itself (as does VO) but does include a brief video-taped interview with someone knowledgeable about the story. The newscaster begins on camera and reads upto a certain point in the script; then the expert interviewed on the subject appears on video-tape, making a comment related to the story. At the end of the sound bite, the anchor-person reappears so as to tag the story before moving on to another news item.

(*e*) *Stand-up:* It is a story assembled by a staff correspondent/reporter. Like the sound bite, in this story too, the newscaster begins on camera and reads upto a certain point and then introduces the reporter. The latter then speaks from the location. These types of stories are considered to be the backbone of a newscast. Reporters prefer to read the stand-up while looking straight into the camera.

Package: The treatment is the same as the case of stand-up except that the story may consist of an interview with an expert/eyewitness apart from the reporter's footage. It is sound-bite plus stand up. The newscaster begins a news item with a brief mention of the highlights of the story and follows it up by introduce the reporter on location, the reporter then states the main points of the news and gives details in a concise style, the report may be interspersed with interviews of the persons in the news. These comments not only fill the gaps in the report but also lend an air of credibility to the reporter's inferences.

Sources for Television News

Television newsrooms generally use the same sources of news that are used by the other media. However, of late, two main sources of news for Doordarshan have come to be booked: The satellite/ microwave video feed services, and syndicated video coverage.

(*a*) The primary sources of news on television are the news wire services such as Press Trust of India (PTI) and United News of India (UNI) among other news agencies.
Still photographs transmitted by facsimile wire services are also used on television, especially those of late-breaking stories for which moving pictures are not available.

(*b*) The satellite/microwave video feed is television's own unique version of wire service. It is an electronic transmission of news stories originally recorded on film or video and sent by closed circuit microwave or through satellite to subscribers who record it on their own videotape and then decide which stories to use for inclusion in their own local TV news-shows.

(*c*) Most stations employ correspondents/reporters who gather news by going out with a camera crew to report an incident event such as a fire, an accident, a conference/ etc. At times, owing to the absence of a visual, the reporter may file a dry story or instead speak to the camera and narrate the story.

(*d*) Film/video coverage of many spot news events such as accidents, fires, floods, earthquake, and the like is often difficult to procure if staff correspondents/ camera person are not available at the time of event. However, such an event is sometimes covered by a freelance camera person scouting around near the scene. This visual coverage is purchased from the freelance camera persons who are known as stringers. The stations have to rely on stringers for unexpected news stories, particularly if the staff camera person is unable to reach the scene fast enough to record it.

(*e*) Most television stations monitor radio-news bulletins and vice versa for important news stories. If the story is very significant and there is no time to obtain visuals, such stories are telecast dry.

Basic Style Rules

You must have noticed that every television station normally has its own rules of news writing style. Not every TV newsroom prepares its news telecast copy the same way. In general, however, these rules described below hold good. The words that TV journalists write have to be read for the ear. Abbreviations, figures, symbols anything that causes the newscaster to hesitate or stumble-impair the newscast. Therefore, to overcome this problem, TV newsrooms have developed style rules for their copy.

Typing

All news telecast copy must be type written in triple space. When writing for radio, use the full page allowing about an inch for margins. For television, use the right half (or two-thirds) of page for news copy. The left side of the page is for video information-visual effects, film or video-tape rolls, etc., the news items can be typed all caps or upper-lower case.

Date the first page of your script. Type your initials (or last name) in the upper left hand corner of every page. Use paragraphs. When you start your story INDENT. Number the stories. If, more than one page is required, make the sentence at the bottom of the first page a COMPLETE sentence. If possible, make it a complete paragraph.

Corrections

When your cross a word, REALLY cross it out. Black it out completely. Leave nothing ambiguous in your script.

Numbers

Whenever reasonable, simplify complicated numbers. It will be convenient and honest to use terms such as "approximately", "more than", "about", and "almost" For example, Rs. 2,001,897.46 in most cases should be written as "slightly more than twenty lakh rupees."

It is also important to spell out all numbers through till the number eleven. Fractions and decimal points should always be spelt out-three fourths, one-half, three point two...

These are rules that make numbers easier to read on the air, but there is one final rule about numbers, they should not be used too often.

Quotations

Newspaper reporters generally quote their subjects directly. News items for broadcast should contain fewer quotes because there is no time for extended quotation's. News on the electronic media is short and very precise as compared to newspaper reporters.

Abbreviations

The rule for the use of abbreviations in broadcast news writing is eliminate the use of almost all abbreviations. Common sense should be exercised when handling names of government agencies or phrases that are sometimes conveniently written as acronyms. Abbreviations such as the USA or CBI are easily recognised by the average listener as the United States of America and Central Bureau of Investigations respectively.

However, the rule is not to use abbreviations in broadcast copy. News writers should write a word as they want it to. be read. If it is "Lieutenant-Governor", they should write it out in full and not "Lt.-Gov."

Attribution

Avoid the common newspaper structure in which the attribution is tagged on after a quotation. This is referred to as "dangling attribution." Do not write, "I am going to win the election", Mr. S.P. Singh said, Broadcasters do not use dangling attributions for two reasons: (1) people do not talk that way, and (2) the listener may think that the words are those of the broadcaster. The attribution should be handled for broadcast in the following manner: Mr. S.P. Singh said he would win the election. Or in these exact words, Mr. S.P. Singh said, "I am going to win the election."

TV Reporting Techniques

The TV news reporter is the eyes, and legs of a TV newsroom. The reporter must get the "facts" on each story assigned to him/her. And sometimes, particularly in small TV news operations, he/she should also be able to shoot news film besides reporting the story. The specific duties of a staff reporter include:

(*i*) gathering and reporting local and area-specific news and features;
(*ii*) writing and editing news;
(*iii*) presenting news on the air, conducting interviews, AD LIB reports, etc., either in the studio or from location.

Qualifications of a TV News Reporter

To perform well on the job, a television news reporter has to posses some basic and essential qualifications. Some of these are given below:

- versatility;
- good writing skills;
- a liberal education;
- excellent understanding of the TV medium;
- integrity;
- photogenic face/pleasing personality;
- good voice-quality;
- confidence.

The best television video-tape or film can almost be shown silent. The pictures themselves tell the story. When covering a story for television, reporters have to make sure that as much of the meaning of the gets into the camera as is possible.

To be able to comprehensively cover the news, television news reporters generally employ the following techniques.

Piece to Camera

Of all the skills needed for television news reporting, the piece to camera is amongst the most frequently used. The piece to camera, which is essentially in vision, is recorded on location.

It has three advantages: it immediately establishes the reporter's presence on the spot; it is extremely simple to execute, and, it is fast enough to be considered a kind of contingency sample.

These stand-ups, are written on the scene, without the benefit of typewriters or the other conveniences of the newsroom. Since the reporter looks straight into the camera, the lines have to be memorized. Sometimes, the-reporters read from a note-book or a clip-board after ensuring the opening paragraph, at least, is word perfect.

Most stand-ups are short-10 to 20 seconds. On some occasions they run longer, especially in complex stories that require a lot of explaining, but do not offer many visuals.

A stand-up can also be used in the middle of a story to "bridge" two other sections of the report. Bridges work especially well when the reporter demonstrates something.

Studio Spots

While the piece to camera is an in-vision' news presentation by the reporter recorded on location, the studio spot is a news item read in the studio by someone other than the programmer's main presenter, as additional information to the visuals. Usually, it is a special correspondent or a reporter who is called upon to draw together the elements of a news story with or without the aid of video, tape or illustrations.

Because television news is a team effort involving many persons, the chances of human error are great in a studio set up, particularly in an 'on-air' situation. There are four simple rules that the on-camera studio reporter/correspondent should follow:

(*i*) Maintain self-control. Expect problems and be prepared to cope with them.
(*ii*) Always prepare file copy. If film or video-tape fails to come up, have the file copy close at hand, to carry on the show.
(*iii*) Never pick your nose or scratch yourself.
(*iv*) Be familiar with studio cue-signals.

Writing to Visuals

We do not watch news on TV just to get the latest news. Radio does a better job. We do not prefer television because we want to get all the news: local, national and international. The newspaper does a better job.

We, as television viewers, benefit from TV newscasters because they transport us to the scene of action. The news is packaged and delivered to us. For this, a reporter must be able to relate words and pictures in a news story. Words fill in the factual details that pictures omit.

While the pictures are indeed important, it is the narration behind the film in most instances that is responsible for the success of visual news stories on television. Poorly written narration can hurt the effectiveness of visuals, but appropriate narration can greatly improve even poorly shot visuals. Writing to background graphics is the same as writing a story to visuals as described above. The trick is to avoid redundancy or repeating what the graphics show.

There are three basic rules which must be followed by the TV reporter writing to visuals:

(*a*) Do not cram your video narration full of details.
(*b*) Relate words to the pictures when telling the story. The narration and pictures must go hand in hand.
(*c*) Carry the viewer into the story by describing it the way it happened. Although the narrator may begin with a brief opening summary (without pictures) telling the viewer the main points of the story; should be told as it happened not necessarily in chronological order.

In short, writing narration to blend with the visuals is one of the most difficult skills in broadcast reporting. The language must be crisp, the timing exact and the words have to click with what appears on the screen.

The Art of Television Interviews

To be a good reporter, a television newsperson must be a good interviewer. Whether talking face to face with a political personality or an expert, or may be when asking questions in front of a television camera, the newsperson must know how to conduct an interview.

For a good interview, learn as much as you can about the person you are going to interview, and the subject matter to be covered. Prepare your questions in advance. These should be short and to the point.

During an Interview:

Let your subject talk. Remember, it is his/her opinions, ideas and thoughts that 'are important. If your subject's answers are not clear, or if they are insufficient, pursue the question further. Use the direct approach if your subject is hostile. Do not turn a conversation into a battle by being aggressive.

Interviewing is more than preparing a set of good questions, it is being good listener and a good friend. It is putting your guest at ease so that the questions you pose may be best answered.

Guidelines for Interviewers

(*a*) Most journalists have considerable experience as interviewers before they come to television. But there is a vast difference between the casual questioning which takes place in the quiet corner of a restaurant or over the telephone and TV interview with its paraphernalia of lighting and camera. Due to this difference, a TV interview of any type on-line recording or recorded on video-tape, for later broadcast makes considerably more demands on the interviewer. He should be able to think quickly to follow up with topics outside the originally planned structure of the interview, besides possessing a capacity to marshall and arrange thoughts so that questions are asked logically and as a corollary, step by step answers.

(*b*) In addition, the actual phrasing of questions needs to be considered. Too many inexperienced reporters, rather fond of their own voices, tend to make long statements, this irritating to the viewer who is keyed up to listen to the views of the interviewee.

(*c*) Next come the cliches like:
Now, what do you feel about...?
What of the future...?

"How do you feel about" type of questions should be avoided. More usually the "How do you feel about" questions stimulate the interviewee/expert into saying nothing more interesting than a few adjectives. It is better to ask questions which help the interviewee/expert to speak about something interesting.

Then, there is the tendency to preface every question with some deferential phrase or the other, presumably to soften up the interviewer:
May I ask...?
Do you mind my asking...?
What would you say if I asked...?
Could you tell me...?
Might I put it like this...?

(*d*) Questions which are too direct are quite likely to elicit either a 'yes' or 'no' without further elaboration *i.e.* Is it true you have resigned because of a personal disagreement with the chief Minister?

It is better to start a question with any of the **Who What When Where Which Why or How** type of questions.

The other way is to ask a question like: 'Tell me how well the new machine is working? The answer is bound to be self-contained without 'Yes or No'.

(*e*) Other questions that need to be avoided are those that are too general—"Has your grandmother's death changed your views on the meaning, of life?" or "How did the thief get into your house and do you think the police will catch him?" All these kinds of questions need to be avoided.

Research for TV Interviews

Research is the backbone of the information for a television programme, including interviews.

Research takes team work: researchers/products look for (1) guests as interviewees (2) facts, opinions and ideas, (3) visual materials, film, slides, (4) graphics, photographs, drawings, maps and other illustrations, also, any other objects which may be shown on video. The television interview is conducted essentially to search for facts and opinions and to explore a personality on behalf of the viewer.

Warming up for the Interview

We all talk and perform better with a "warm audience", with family and friends who laugh at our jokes and sympathize with our needs. At home with friends, we talk, sing, and debate freely and enthusiastically. But most of us dry up and our performance drops in the face of a large or critical audience. We clamp down on our emotions and pick our words carefully to make sure they have the right effect and also to show our superior high intelligence and status. A TV interview and a public speech are poles apart. The perfect interviewer would evince keen interest in the subject and take the trouble to make the guest forget the audience watching and listening through the TV cameras and microphones.

TV, like radio, is an intimate medium. We watch and listen alone or in a small circle of family and friends. It is true that TV personalities are like guests in one's home. The broadcasters becomes well-known to viewers. It is important to take the audience along at every step of the interview. The hardest thing to do is to listen. Listening to your guest's answers instead of studying your list of prepared questions does two things. It encourages your guest to shed inhibitions and respond freely to your questions. And it enables you to pick up the thread of thought and follow naturally with the next question.

Questions for TV Interviews

A television interview should seem like a conversation, not a cross-examination. Listen to casual conversations. Watch when and how a person responds to non-verbal and face such as lifting your eyebrows or frowning.

By reacting to what your guest says you make viewers set up and take note for example:

1. Show surprise or wonder within called for. Your reaction, draws viewers attention to the importance of what the guest has said. It also makes your interviewee react and comment in turn.
2. "Not really": mild disbelief sometimes with slight overtones of kidding; this forces your guest to confirm some action and defend it.
3. "That must have been…You must have been delighted": show empathy. By tuning yourself to the same wavelength as your interviewee, you encourage the latter to speak openly. Express your reaction in the same vein.
4. Watch cut for "I see" or "Un-hun." This is the beginner's way of filling time until an apt question comes to mind. It is not a true reaction, only a time filler. You can force yourself to drop a nervous habit like this once you see the recording and become aware of how awkward it sounds.

5. Be interested and show it. Laugh at the jokes your interviewee cracks. Listen attentively. Occasionally nod your head or smile, or whatever, to show you sympathize and care. Avoid looking at notes, shuffling papers, looking around for cues and otherwise ignoring your guest. As far as the interviewee is concerned, you are the sole member of the audience. If you seem to be nervous or give a brush-off, to the guest, the interview will fizzle out and end in that very moment.
6. Intervene to illustrate an obscure point and make it clear to the viewers. Such elaboration helps viewers to get the idea. If the example is rather inappropriate, ask to be enlightened further to clarify your doubts so that both you and the viewers understand the point correctly.
7. Add information and seek comments on the same. Place things in context. One method by which to add depth and guide your guest to make the interview proceed along a certain line is to exclaim and comment for instance. "Of course, he had ambitions to lead the party."
8. Give the background of your guest for your viewers information. You can inform them at the beginning about why your guest's comments are worth listening to. "You went through that yourself...Having been the editor of the journal, you must have strong views on. that."
9. "You once said..." Cull lively quotes from your research material and use them to start a new subject or throw new light on the same. The quotes may even contradict what your interviewee is saying.
10. To get a story from by-standers, pump them with simple questions and keep priming the pump the pump as needed. Your string of questions might be:
    Where you there?
    What happened?
    Then what?
    What else did you see?
    Could you hear it?
    How did you do feel?
    What did you do then?
    Why did you (they) do that?
    What did he say?
    Did you notice anything else?

So many programmes employ journalists and journalistic skills in television today that it is difficult to set a limit to the term "television journalism." It spins over into light entertainment and drama, and their techniques in turn are used in news feature programmes. This cross-fertilisation has led to some of the best and most exciting programmes documentary drama like Cathy Come Home, the "satire" programmes of the 1960s and old classics like This is Your Life. All of them owe something to journalism, just as news and current affairs sometimes use dramatic presentation style.

The most familiar form of television journalism is the daily news programme, although, oddly enough, it is not typical. In office structure and organization it is much more like a newspaper than most other current affairs programmes. It is divided into reporting and editing sides or input and output as the BBC calls it. One half of the organization covers the news as it happens, and the other half selects, puts in order, and presents. Always, the news must come first. Other programmes may select their material to suit the medium, but the newscasts must give the news whether it makes "good" television or not. Everything a news department does follows from this fundamental imperative story selection, writing, graphics, even the newscasters tone of voice. A combination of simplicity, clarity and urgency is the only possible style.

News Desk Routine

The fictional description in this chapter based on actual programmes of independent Television News, London, but in their essentials they are typical of any television news-department anywhere. Many were, in fact, modelled on it ITN has a great advantage over most television news organizations: it is an independent non-profit company specialising exclusively in news, and has its own studios and technical facilities. Elsewhere, the news is often done by a department within a bigger organization, and must share technical facilities and technical staff with other programmes. In ITN, there is a constant identity of everyone in the company with the idea of news.

The ITN day begins when the duty news editor come into the big open plan newsroom about 7.30 am. His job is to select and organise home news coverage for all the national news programmes. Over-breakfast and on his way to the office, he will have heard the early morning radio-news, and will have read all the morning papers. Waiting for him is the trickle of early morning copy from the news agency teleprinters, and the schedule of stories they expect to be covering. He compares it with the ITN news diary, complied by the senior news editor and his forward planning production unit. About two-thirds of all news is predictable, in time and location if not in outcome, which is a blessing for television: a newspaper can reconstruct an event in words, but television cameras must be at the right place in advance.

A typical day in a television newsroom might go something like this. A verdict, and perhaps sentences, are expected, in a notorious corruption case involving provincial town councillors and Whitehall officials. The hearing is in Manchester, and has been going on for some weeks. A reporter and mobile video unit are permanently assigned. Cameras are not allowed into the court itself or even the precincts of the building, so the reporter has been sending summaries of each day's proceedings by landline and/or microwave to ITN for recording. Shots of he arrivals of principal witnesses and counsel were edited into his narration.

The other big story is a vote in the House of Commons, which might lead to the fall of the Government. The debate begins early in the evening, with a vote likely during News at Ten. The political correspondent, of course, liaises with the editors of the news programmes as does the parliamentary correspondent. There are no cameras in the house, but sound radio coverage is available from Independent Radio News, with their reporter's commentary. There is little for the news editor to do on this story except keep a watching brief. There.is a Cabinet meeting at 11 a.m., and a cameraman is already in Downing Street for mute scenes of comings and goings to provide movement and illustration for and otherwise wordy story.

Also on the diary is a trade union conference at Brighton. This would not normally rate coverage by a sound film unit, but today the general secretary is expected to make a speech on union policy that could affect hundreds of factories. It would be useful to have an electronic camera on the story so the sections of speech could be played back up the line for assessment, but ENG units are still reserved for stories where speed in sending pictures back to base is essential. The unit will put their film on the train at midday, so it should be in London and processed by mid-afternoon. The PA report of the speech will be available soon after it has been delivered, although reading does not provide as good a basis for editorial judgement as seeing and hearing.

Another industrial story is the end of a long and notorious strike of refuse collectors in a town 20 miles from London. There may be some good pictures of the clearance of accumulated rubbish. The news editor assigns a reporter to set up some filming, and passes the basic facts to camera assignments department, who allot a sound film unit to the story, and arrange facilities. Assignments are also booking lines from Manchester for the corruption trial coverage.

A reporter has been working for two days on a report of an inquiry into the perinatal morality rate in England and Wales. Prepublication copies of the report have been given to the Press, embargoed until today. The Secretary of State for Health was interviewed yesterday for today's story, and now the reporter is going to talk to mothers and doctors about home versus hospital confinements. News at Ten want a four-minute "packaged report, live or on video-tape, using speech to camera, film with commentary, interviews, graphic etc.

A film unit has already been assigned to the clinic, but the reporter is asking for another unit to film an interview with a famous obstetrician. There is a shortage of units that day through sickness and out of town assignments, so the news editor is reluctant. He agrees, but is aware that he may have to go back on his decision.

Next the weather. A stormy night over much of the east coast caused much damage, injuries and some deaths. A trawler is in trouble in the North Sea, and there are reports of damage to an oil rig. Anglia Television are planning a big weather story in their local news magazine after the ITN News at 5.45 pm. They agree to send highlights of their coverage, by landline, during the afternoon for recording on video-tape. This is to be used in ITN's national round up. The news editor asks for similar coverage from Yorkshire Television, and discovers that Grampian Television in Aberdeen are flying a cameraman over the oil rig.

By this time, the foreign desk staff are well into their working day, contacting reporters and camera teams overseas, discussing the offerings from Eurovision and the UPITN offices in New York.

At 10 a.m., the first conference of the day looks ahead to News at Ten. It is a tended by the News at Ten programme editor, the chief sub-editor/writer, the home and foreign news editors, a representative of assignments and the editor-in-chief, or his deputy, in the chair. The vote of confidence in the Commons is the obvious lead story for 10 pm, as the future of the Government will be in the balance as the programme goes on the air. The bribery case is an equally obvious second story, but it will be ageing a little by then. The home news editor suggests that if the general secretary's speech in Brighton does not clarify union policy he knows where to contact him for an interview. There is also a good story awaited of a possible record transfer fee for a footballer. The infant mortality report is welcomed as a good depth story for the second half of News at Ten. It is agreed that a film of an anti-vivisectionist demonstration, crowded out the previous night, is now dead as a news story, and the film of a pop group's arrival at Heathrow Airport is too dull.

The foreign editor reports that UPITN has routine coverage of delegates arriving in Cairo for a conference about Palestinian refugees: an ITN crew and reporter have arrived in Baghdad, and there may be some pictures later in the day, via satellite, of student demonstrations. This will be offered to Eurovision. RAI is sending coverage of the Italian election results, via the Eurovision news exchange, and the ITN correspondent in Rome is preparing an explanatory piece. From Australia, edited tapes of the overnight play in the Test Match are being transmitted together with commentary, introduction and sign-off by the ITN sports reporter with the team. Also from Australia, by air fright, is an exclusive filmed report on a new custom built car designed for one of the world's leading racing drivers a flamboyant character. This kind of story, offering both human and visual interest, is useful in lightening a programme packed with "hard" news.

In the newsroom, the copytasters are at work, one for each news programme, sorting the mass of news agency copy now pouring out of the teleprinters. Their job is to weed out material that is not wanted, to classify the stories that may be used, and to keep track of all incoming news material throughout the day. Each copytaster controls the flow of copy to his chief sub-editor, who is responsible with the programme editor for the final selection, arrangement and presentation of the stories in the newscast. The writing of the stories in the tight precis from demanded by television is don by the sub-editors, working under the direction of the chief sub. Their drafts come back to him for editing into the script for the programme. In television, agency copy is nearly always rewritten to suit the spoken word and the visual image, as well as to achieve the brevity needed.

The main editorial conference for the 5.45 takes place just before noon. Each newscast has its own style, according to the type of audience, the time of day and the programme's duration. The 5.45 news, 15 minutes long, is at a time when most of the news of the day has broken, but has not yet been fully assessed. The audience is larger in Scotland and the north of England,, where people tend to finish work earlier, and have less far to travel home. Much of the audience in London and the south of England is still on the commuter trains between 5.30 and 6 pm. At that time in the evening, the audience wants a brisk, clear, concise and vivid summary of the day's, news. By 10 pm the mood has shifted, and the audience are ready for more depth and analysis.

The conference agrees that the corruption trial is the obvious lead. The political story is essentially a scene-setter and curtain-raiser; the real drama will be at 10 pm. There trade union story is likely to be important and significant. The weather story will depend largely on the strength of the pictures. Among other stories sure to find a place are the Test Match coverage, the record transfer fee for the footballer and the report on perinatal mortality. The programmed editor says he is not interested in the background to the report, or in public and professional reaction; at 5.45, he wants the basic facts, the highlights, and is content to leave the rest to News at Ten.

The foreign editor says UPITN are expecting pictures via Eurovision from an American crew in Baghdad working for an American network associated with UPI. There may also be a unilateral transmission by the ITN crew. The newscaster asks if there has been enough explanation of the background to the riots, and the possible consequences to oil supplies. The programme editor says this aspect has been explored in previous editions of New at Ten, as well as in other programmes and newspapers. To cover the same ground in a 15 minute newscast inevitably means excluding something else-perhaps the cricket coverage? In the end, the chief sub promises to ensure. that the story is written so as to relate it to the viewer, and the newscaster accepts it with some reluctance.

The programme director asks for some graphic material to enliven the trial story-photographs of the accused, with the verdicts, sentences or the judge's comments lettered alongside. It is agreed that the reporter, the sub writing the story and the graphic artist will prepare a framework, leaving only a few gaps to be filled in at the last moment. The responsibility for initiating visuals lies with the writers of individual stories, but it is the director with visuals lies with the writers of individual stories, but it is the director who orchestrates the script into the succession of images and sounds that make up a television programme. He must be aware of every picture and where it comes from studio camera, film, VTR, or caption scanner; and every sound source microphone, film sound track, disc, tape or OB.

As the conference ends, a PA "rush" arrives: the defendants in the corruption case are all guilty. Sentences are expected late in the afternoon. The reporter promises a descriptive summary of the day's events up to the verdict, along with the few pictures the unit have been able to shoo. This, together with background material assembled by the writers in London, in anticipation, will form the bulk of the report. The news into with the sentences will be prepared at the last moment. The sub on the story reads carefully through past reports of the trial to check the facts of the case: reports of court proceedings are "privileged" only if accurate, fair and contemporaneous. It is important that the defence be properly reported: a man may be a villain, but no one is entitled to make him out a greater villian than has been proven.

Other subs are at work on their stories, looking at films and video-tapes, researching background, drafting introductory paragraphs, writing linking commentary over film and briefing graphic artists. All this information must be reduced to a few sentences which convey the essentials of a story at first hearing. These are read by the chief-sub, again by the newscaster and the programme editor. Sometimes they are cut and rewritten again. Easy reading is not easy writing and on television, words, voice and moving images must fuse together.

The newscasters, too, are actively involved in the writing and decision making. To present the news with conviction, they must feel the programme is theirs.

During the afternoon, the pace quickens. A "rush" from PA tells of a mysterious explosion on a housing estates in the suburbs of London. A pop singer newly returned from abroad has been charged with possessing dangerous drugs. A big fire is reported in the docks. The film of the trade union leader's speech has been lost at the railway station. The chairman of a civil rights pressure group wants coverage of a demonstration outside a foreign embassy. A well-known actor has died.

The news editor decides not to react to the explosion until more is known. It might be a terrorist bomb factory, like the one discovered last week or it might be a minor gas explosion. A newspaper could send a reporter just to find out; a television news editor has to think twice before committing one of a limited number of expensive camera units. The rushes on the dockland fire seem more serious. He checks with assignments, who tell him they have only one ENG unit free, but there is a cameraman with a mute film camera. He decides to put him on standby. The pop singer, he suddenly remembers, belongs to the group filmed at the airport last night, and he calls the information across to the sub editors. The rejected film is hastily salvaged. The civil rights man is fobbed off. If ITN covered every demonstration set up for publicity, they would film nothing else. Nothing much is emerging on the explosion story, but the dockland fire looks more and more important, it is in a big paint warehouse belonging to a chemical corporation. The news editor remembers that the company was recently listed as a prime target for terrorist attack. He decides there is nothing to lose by commuting his mute cameraman, and there is still time to send the ENG unit if the story develops.

What about the actor? Is there a filmed obituary on stand by? Is it worth finding a clip from one of his old films? The programme editor says one of his writers will handle the story. He thinks it is worth a sentence or two, with a still picture.

The flow of copy from the sub editors to the newscaster of the 5.45 is increasing. Each story is read and perhaps revised by the chief sub and newscaster, then passed to the director for technical notes. It is then typed in fair copy by the team of production assistants both on to the script that the newscaster takes into the studio, with copies for the director and others, and also on to the Autocue roll. The chief sub and the director keep a record of estimated timings. No attempt is yet made to put the stories in order. Between now and transmission, anything can happen. At this stage, the studio manager, who acts as an assistant director on the studio floor during rehearsal and transmission, sits in with the director to familiarise himself with the developing programme; the vision mixer, too, has a watching brief on the various visuals which may have to be switched to and from during transmission. Some stories in the 5.45, such as the report on perinatal morality are prerecorded packages on video-tape, and these will be directed during the afternoon by the director of News at Ten; in their turn, the 5.45 team will prerecord packages in the early evening for News at Ten.

The chief sub, visuals, now reports that the video-tapes from Baghdad are much more dramatic than expected. The coverage of the Cairo conference, however, is poor. The programme editor agrees to reduce the story to a two or three liner, without film, and to give the extra time to the Baghdad footage. The weather story, too, has some outstanding pictures, and on a less strong news day might have become the lead. More adjustments are made to estimated timings, and the programme editor asks the chief sub to cut everything hard. Five words cut per story can release 20 valuable seconds in a 15 minute newscast. The foreign editor, on the telephone to Baghdad, tells the ITN crew to cancel their satellite transmission, and switches them to a different aspect of the story.

A rush from PA says that an injured watchman from the burning warehouse has told the police he saw two men running away just before the blaze started. Police are investigating. The news editor alerts assignments to put the ENG unit on the road, and to bring back the mute cameraman's film coverage as fast as possible. Next he takes a reporter off some research he was doing for a future story, and sends him off to the fire with a quick briefing.

From Manchester, the reporter at the trial says sentences are expected at about 5 pm. A microwave like is to be arranged from the ENG camera car to the Granada studios. From there, the signal will be relayed south by landline.

More dramatic weather pictures are coming down the line from Scotland, but the programme editor cannot a afford to allocate any more time to the story, so some re-editing will be necessary to include them. The missing film of the trade union leader has been found, and is just going for processing. Someone else calls to claim responsibility on behalf of a terrorist organisation for the warehouse fire. He hangs up while the news desk are calling the police. It is impossible to establish whether or not the call is a hoax.

By now, the editor of the 5.45 is agreeing the running order of the programme with the chief sub, newscaster and director: the lead story is the corruption trial, with the political story second. These two are obviously the big stories, but they are lacking in pictures and action, so the weather is slotted in next. It takes the programme out of the studio and London and the pictures are lively.

The rest of the programme falls into place almost of itself. After the weather, the union story; then the ending of the refuse collectors' strike seems to follow naturally by association of ideas. The fire takes precedence over the perinatal mortality story because it is more urgent, but the programme editor resists the temptation to use it earlier, until the facts are clearer. The film is just arriving in the building, and will be rushed through the labs in the next half hour; the ENG unit is shooting on location and will be transmitting back as soon as video links are established.

Pressure on programme time is now more acute. The Cairo conference film has already been dropped; even the brief spoken report is likely to go too. The sport cannot be shortened any further. The death of the actor must go unreported. The running order is passed to the film and video departments so that tapes and films can be loaded in the correct order. The chief sub looks passes them for typing. They will be recorded by the newscaster as a voice over, to match appropriate pictures inserted into the video-taped opening titles. The director of News at Ten does this chore so that the director of News at 5.45 has a chance of rehearsal.

In the studio, captions and maps for the 5.45 are distributed among the cameras according to the allocations marked on a camera sheet during the afternoon. In the control room, the director of the 5.45 and his PA settle themselves in front of the banks of television monitors, and ask over the talkback about the availability of tapes and films for the rehearsal. Most are ready, but the fire and trade union conference films are still being edited. Order emerges from the chaos rapidly: everyone from electronic engineers to production staff knows what is needed. No two news programmes are ever the same, but each is made up of permutations of a few basic production options: newscaster to camera, film, video-tape, remote insert etc. Most of the practices are almost automatic opening and closing routines, newscaster always in medium shot or medium close up, speakers always identified by a standard size caption superimposed on the lower third of frame and so on.

Rehearsal reveals that less than 11/2 minutes are left for the trial report and the fire film. The programme editor passes this on to the chief sub, visuals, suggesting no more than 50 seconds for the court reporter's tape and 30 seconds for the fire pictures. Last minute revisions and additions to the script are arriving; the caption cards with defendants' photography are placed in front of studio cameras, while the sentences and the judge's comments are fed into an electronic character generator through a keyboard; the recording from Manchester is being loaded on VTR, and the edited film of the fire is on its way to telecine; the editor confirms that the Cairo story and the actor's death are cut, but he is still hoping to squeeze in the arrest of the pop singer. The cuts are passed over the talkback circuit by the director, and are transferred by the news caster to his script, and by the Autocue operator to the roll of paper that will be projected in front of the newscaster's camera; sound mixer, vision mixer, VTR and telecine note the changes that will affect them.

"One minute!" The PA's voice rings round the talkback circuit. Everyone makes a final check of equipment, instruments, script. The newscaster runs a comb through his hair. The director asks a cameraman to go closer on a caption.

"Thirty seconds!" calls the PA.

"Stand by VTR" says the director. This is the video-tape recorder that will play back the titles. It must be cued 10 seconds in advance to run up to speed.

"Five seconds to VTR, four, three, two, one."

"Roll VTR!" says the director. A finger punches a button in the VTR room, and the tape reels begin to move.

"Ten seconds to programme."

"Coming to titles on VTR, then to newscaster on camera," says the director. In the continuity studio of Thames Television a mile away, the station announcer is saying: "…for the news, over to ITN."

"Five, four, three, two, one."

"Take VTR" The vision mixer presses a button, and the titles appeal on transmission. After a few seconds of music, the spoken headlines are heard, coinciding with appropriate pictures on the screen: "In the corruption trial, all defendants are found guilty. Sentences range from six months to five years.

"The Government could fall as a result of tonight's vote in the commons over city subsidies."

"Coming to camera" says the director.

"George Boots is finally sold to Manchester Rovers for a record fee of half a million but the FA has objections."

"Cue him, take!" The studio manager's hand sweeps down in a cue to the news-caster as the vision mixer presses the button to switch from VTR to camera.

"Good evening," says the newscaster. "Sentencing the defendants in the corruption trial at Manchester 45 minutes ago, Judge Henry Blank said their conduct had left a shameful stain on public life. He said. Mr. David Oxford to prison for five years. "You were the ringleader," he said: Mr. Jonathan Cambridge got three years. "Your conduct was foolish as much as wicked."

During these words, caption cards appear, showing the defendants' pictures with their sentences and the judge's comments lettered beside them. The lettering is superimposed by the vision mixer from the character generator, when all the sentences are reported, the director cues in the tape describing the scene in court and the day's happenings.

The editor's telephone flashes. It is the chief sub, visuals, to say that the ENG unit at the fire is ready to insert a recorded a interview with the fire chief about the possibility of sabotage. The editor decides to see it for himself.' There is just time.

"If it's really worth using," he says to the chief sub, "we'll put it in near the end of the programme. Find about half a minute will you?" He steps out to the VTR room, and watches as the ENG unit play the tape back, and it is recorded on VTR. The essential portion is 20 seconds long. The interview adds colour and immediacy to the story, but it gives no new information. The programme editor decides it is not worth the sacrifice of anything else. News at Ten can assess it in the light of more facts. Back in the control room, the chief sub has written a link, and is proposing to omit the pop singer story to make room for the fire interview.

"As you were," says the editor, "it's not really strong enough."

At 17.59.40, the closing caption appears. At 17.59.45, it fades from home receivers, and a commercial takes it place, cued in by the master controls of the various ITV companies all over the United Kingdom. It works to the second, on a precise schedule.

As the 5.45 news comes off the air, News at Ten is taking shape in the newsroom. At 7 pm, a conference will fix the content and probable running order. The 5.45 was a race against time; the full half hour of News at Ten is a different matter. The structure needs more planning, and the individual stories, running at up to 5 minutes, also need to be carefully structured.

Two newscasters provide variety for the viewer, and give the practical advantage of allowing the one not actually on the air to receive messages and alter his script. Farther variety is provided by specialist reporters presenting their own "packages" of material. A danger here is that too many reporters may dilute the authority of the newscasters. There is also the specialist reporters all too human tendency to equate personal success with personal appearance. The editor must keep the balance. In building the programme, he must demand that every sentence and picture should interest the audience. If a subject is important but not necessarily attractive, he must insist that is related to the audience. "Thou shall not bore" is the greatest commandment of them all, because a bored audience ceases to be an audience at all.

In News at Ten, the usual pattern, after an attractive menu of headlines, is to cover the most important stories in the first half before the commercials, trying to achieve a good mix of talk and pictures. The editors also tries to keep some continuity in the sequence of stories: industrial stories tend to be grouped together; foreign news follows a geographical pattern, if there is no stronger connection. There are, however, no restrict rules selection is as much intuitive as national.

The second half normally has "softer" news-human interest stories, sport, investigations, background pieces. There is always a danger that the viewer might switch channels at the commercial break, so the contents of the second half are trained at the end of the first, and a lot of effort goes into producing the specials so that the viewer looks forward to them as a regular feature.

In this imaginary programme, interest is kept high as the result of the vote in the Common is awaited. The lead itself is likely to be no more than an extended headline, setting the scene. The second story may well be the warehouse fire, if evidence emerges of terrorist action. If not, then the corruption trial will take second place. Any follow-up would probably go in the second half, or be left until the next day. The perinatal mortality report is also a natural package for the Second half along with sport and the racing motorist's new car.

The golden rule, as always, is that the news must come first, but within that imperative an editor must attract and retain an audience as much as any other television producer. The penalty for failing to stimulate the viewers' interest is to lose their attention; the penalty for failing to give the serious news its proper weight is to lose their trust.

METHODS OF WRITING AND EDITING RADIO AND TV NEWS

The basic difference between print and broadcast journalism in that the former is designed for the eye, while the latter is produced for the year. This gives newspaper reporters a slight advantage when they sit down at the typewriter, fingers poised to bang out a story. They don't have to be particularly concerned about the complexity of their sentences. Even if a sentence includes four or five dependent clauses, the reader can simply read the phrase over and over again until it makes sense.

The broadcast writer does not have this luxury. A story is read and heard only once. If the listener is confused by a particularly complex sentence, he is out of luck. He can't ask the newscaster to repeat some confusing point. The listener has to be able to understand the story the first time, there's no chance to repeat.

Since broadcast journalism is designed for the ear, it is important you write what has been called "hear" copy rather than "see" copy which is the hallmark of newspapers.

Newscasts are written in conversational style, the informal main in which a person ordinarily speaks. Sentences are kept relatively short and straight to the point. The simple declarative statement is preferred.

Complex sentence structure, little known words and other literary techniques should be used carefully because they tend to be misunderstood when heard even though they make sense when they are read. Consider the following typical newspaper lead. Read it aloud to a friend and see if she can tell you what it says:

> Speeding to the beside of his dying wife, Welter Smith, a Bell Telephone company repairman, was seriously injured today when he was thrown the windshield of his truck after it collided with another car driven by Melvin Potts, 33, of South Danbury, New York, who, police say, was driving with a suspended driver's license.

In general the following are some of the major differences between print and broadcast style:

1. The inserted sentence structure used in newspaper writing is avoided in broadcast news.
   NEWSPAPER: There is no danger from further flooding in the area, according to Welter Thompson, director of the North Coast Flood Control District.
   BROADCASTING: The director of the North Coast Flood Control District, Welter Thompson, says there is no danger from further flooding in the area.
2. Sentences are kept short in radio TV writing, almost to the point of oversimplification:
   NEWSPAPER: The present tax base of three dollars, which is a 30 per cent increase over last year's rate, but down from five years ago, will be increased another two per cent as of June 1 if tomorrow's tax over-ride election is successful.
   BROADCASTING: If tomorrow's tax over-ride election is successful the present tax base of three dollars will be increased two per cent June first. The present rate is 30 per cent higher than last year, but is still lower than it was five years ago.
3. Subjects and verbs are kept close whenever possible.
   NEWSPAPER: Cosa Nostra boss Nick "the Spaniard" Gomez, who has often refused to testify before the U.S. Senate Committee on Crime and, who is well known for his dealings in labour rackets, illegal gambling and drug smuggling, was arrested today for refusal to pay last year's federal income tax.
   BROADCASTING: Cosa Nostra boss Nick "Spaniard" Gomez has been arrested for refusing to pay last year's federal income tax. He is well known for his dealings in labour rackets, illegal gambling and drug smuggling. Gomez has often refused to testify before the U.S. Senate Committee on Crime.
4. Identification of subjects such as age, job title and the like come before the name in radio TV writing, rather than after.
   NEWSPAPER: William Jones, 43, chief supervisor for District Number Five of the Narcotics Control Bureau said."
   BROADCASTING: The chief supervisor for District Five of the Narcotics Control Bureau, 43-year and William Jones said.

5. In broadcast writing it is permissible, and often required for clarity, that incomplete sentences be written.
   NEWSPAPER: The black acrid smoke billowed from the uncontrolled oil rig fire leaving a swath of chocking junks and tear-filled eyes.
   BROADCASTING: Choking lungs-tear-filled eyes… those were the results of the black acrid smoke which billowed from the uncontrolled oil rig fire.

There is one danger in writing in the conversational style: verbosity. Once you are aware of this pitfall, the way you would tell the story to an interested questioner is a good guide as to how you should write the story for your listeners.

Careful reading out loud will catch errors and point out sloppy writing. This emphasis on "hear" copy has been carried to its ultimate by the news service of the British Broadcasting Corporation (BBC) which insists that its news writers dictate their stories to a secretary who types the final script. This may seem a bit extravagant to us, but it does force the writer to think in terms of "hear" copy rather than "see" copy.

The reporter who wrote the following lead for a late night newscast obviously didn't reread the copy to see if it made sense.

After fatally shooting himself, 42 year old Robert hall was taken to the county emergency hospital where he later died.

How can someone she is "fatally" shot die later? The word fatally means dead.

Relying on "rip and read" wire copy which is used verbatim from the wire service machine is no guarantee of good "hear" copy. In fact, it should be a cardinal rule in any news operation that copy from the press associations should never be read as is. It should be considered nothing more than the raw material from which the reporter tailors a story to fit local needs and interests.

If deadlines and small newsroom staffs make it impossible to rewrite all of the wire copy, an attempt must be made to at least pre-read the material before going on the air to make sure it makes sense when read out loud.

This warning is imperative for a number of reasons. First, wire service material is written for newspaper deadlines and, as United Press International likes to boast, there's always a deadline somewhere in the world. This concern for deadlines means the wire services must be constantly up dating stories during the day. They are not concerned with making sure the stories are in some sort of logical sequence that one item about the president will not duplicate an earlier story; that one story on drugs will be five stories away from a similar report from another part of the state; or that the part of the story of most importance to your audience won't be in the paragraph rather than in the lead.

Second, the broadcast service of both press associations is often treated like a stepchild. Unfortunately, both organizations reportedly put their most inexperienced writers on the radio-news desk. Few of these writers get out in the field to prepare first hand reports. Radio-news, in many instances, is nothing more than standard newspaper wire copy shunted over the radio desk for rewriting for distribution to radio and TV stations. The result is often disappointing. Often unfamiliar with the nuances of "good writing," the writers manning the rewrite desks many times prepare their copy with one hand on a style book and the other pounding the typewriter. This formula approach produces writing that is often stereotyped and stodgy; writing that fairly begs for local reworking. Finally, wire associations are preparing copy for clients all over the world.

They must emphasize the aspect of the story that has the most general interest. It would be impossible for them to "localise" each story to fit your area. Therefore, it is left to the local station to take the wire copy, and rewrite it to find the local angle that will tell listeners what is important about the event; why they should pay attention to the details of the devaluation of the franc, for example.

This search for the local angle is probably the most important reason for rewriting. The ends of an audience differ from area to area, from station to station. And if a news-cast is to succeed in presenting information about the world, it must put it in terms its audience will understand and see as relevant. There is hardly a report, regardless of geographic origination, that cannot be localized and brought into perspective.

"Ripping and reading" can lead you to miss important local stories. Say your Mission Hills radio station receives the following from UPI, "Ripping and reading" without rewriting would bury the one local name so far down in the story it would be missed by almost everyone:

> (Casualties)
>
> (Washington)—The Defence Department has announced

> the names of 25 servicemen killed in a crash of a C-135 transport plane near Hartford, Maine. They included the following men from California and Nevada.
>
> Master Sergeant John A-B Dill Junior, husband of Mrs. Bette Dill of Corte Madera.
>
> Army Captain Robert Mance, husband of Mrs. Nancy Mance of Sacramento.
>
> Army Sergeant John Wille, son of Mr. and Mrs. Wille of West Covina.
>
> Army Private First Class Douglas Weston, son of Mr. and Mrs. Stephen Weston of Hacienda Heights.
>
> Army Specialist Four William Gold, son of MR. and Mrs. Kenneth Gold of Mission Hills.
>
> Rewriting for your local audience would see the final casualty moved up and made the lead.

A Mission Hills man, Army Specialist for William Gold, son of Mr. and Mrs. Kenneth Gold, is included in the latest list of servicemen killed in a plane crash...

Not only does rewriting give you a locally oriented story, but it does a number of other things that will help a news operation out perform its competition:

(1) It gives your station a different "sound" Since many stations subscribe to the same service, all reports sound alike. Rewriting gives you a new version. (2) It gives you the opportunity to correct mistakes the wire service may have made. (3) It allows you to update stories, placing the most recent development in the lead. (4) Rewriting gives you the chance to consolidate various items under one comprehensive lead.

Rewriting to Update

There is another important reason to rewrite the news-boredom. Radio-news, unlike a newspaper, is presented a number of items throughout the day. Often, a radio station will feature news twice an hour that's 48 reports in a 24 hour day. While some of the items in each newscast will be fresh, much will be carry-over from earlier reports. Since the majority of your audience tends to listen to the same station all day, if you do not make an attempt to freshen old copy for each newscast you will lose many of them out of sheer boredom.

From a strictly commercial viewpoint consider the following situation. There are two radio stations in a small city. Both have hourly newscast throughout the day. Station X relies on the wire services for its reports, giving little attention to the problem of reputation. Station Y, on the other hand, goes out of its way to freshen its copy each hour, giving new developments top priority. Which one do you think will be the most successful in the long run?

Rewriting your stories accomplishes two goals in addition to the ones mentioned previously: it presents new angles and developments; and it makes the news sound fresher, giving your station a "different" sound than its competition.

There are three basic rules which should be emblazoned in fiery letters on every newsroom wall:

1. Rewrite every story of the same event emphasizing the newest angle or development.
2. Rewrite every item of a "running" (continuing) story making sure that as a minimum you rewrite the lead.
3. Rewrite all wire copy in terms of local news and audience needs when possible.

It takes a skilled writer to rewrite a news item without distorting the essence of the story. The writer must be able to take a story and dig up an angle or a new twist that makes the story different than the one aired the previous hour.

Most of the news in any newscast is related in some way to other news. It usually takes more than one report to tell full story: After the first account has been broadcast, there are usually new developments which must be reported. And it is this ability to "update" which separates the good writer from the hack.

The skill to pick aspects of a news story which must be investigated further is a valuable asset to a reporter and writer. Tills "follow-up" procedure is the major reason why all radio-news operations should subscribe to the local newspapers, monitor the competition and keep abreast of development in the national media.

The day of the exclusive story, the "scoop" is gone. Most major news sources these days are conscious of their relationships with the news media and go out of their way to inform all of them of the latest development. Transportation and communication facilities have become so efficient that it is now almost impossible to keep a story "under wraps."

Thus it is perfectly acceptable for one medium to use another for an idea for a story. I am not suggesting verbatim copying from other media; that is not only unethical but illegal. But I urge you to use the other media as "idea sparkers." Read the local newspaper, listen to your competition, and if they have a story you do not have, then go out and develop your own report on the same event using their story as a primary source for names, leads etc.

When you begin to rewrite an earlier story there are a number of points that you should emphasize in your new version:

1. New information not available when the first story was presented.
2. Causes and movies not includes in the first report.
3. Results and consequences of the first story.
4. Opinions about the event.
5. The significance of the event in light of local developments.

Latest developments surrounding the event should always be emphasized in the lead. And since radio specializes in what is happening 'now,' the best lead in a rewrite is a present or future tense slant.

For example, your nine o'clock newscast featured a story that reported the arrest of three students for staging a sit in to protest some college policy. The first version might highlight the fact that they were just arrested; your second story, aired at noon of the same day, might lead with the fact that they are still in jail; while your third might feature a new development:

> NINE O'CLOCK: Three college students have been arrested by local police for staging a sit in to protest the firing of five professors. There was no violence reported on the campus.
>
> NOON REPORT: Those three college students for staging a sit in are still in jail a this hour. They have not yet been formally charged by police who say they were breaking the law by blocking the entrance to the college's administration building. The sit in was staged to protest the firing of five professors.
>
> SIX O'CLOCK: Formal charges of disturbing the peace have been filed against those three college students arrested this morning for staging a sit in to protest the firing of five professors. Trial date has not been set.

The trial date for those three students arrested today for staging a sit in has not yet been set. Earlier today the trio... who were protesting firing of five faculty members... were formally charged with disturbing the peace.

Notice while each of the follow-up stories features a new development, a "tie-back," was prominently included. Never should the writer assume that the audience has heard the previous reports. Just as the movie serials of Saturday afternoon fame prefaced each chapter with a resume of previous developments, so should your up-dates.

This "tie-back" is usually inserted in the lead in the form of a phrase or dependent clause, but any grammatical device can be used. Sometimes the tie-back may be delayed until the second paragraph.

But whatever technique you use, it is essential that your stories emphasize the latest developments. Consider the following examples and notice how the second version emphasizes the "now" aspect.

> POOR: The City Council last night voted to install new traffic signals in the downtown/area to ease the flow of traffic.
>
> BETTER: Traffic flow in the downtown district will hopefully be smoother in the future as the City Council last night voted to install new traffic signals in the area.

Another angle to look for while rewriting is the cause or motive for the event:

> ORIGINAL STORY: Five persons are dead this evening following a five alarm blaze which leveled a three story apartment building in downtown Reading. The fire started on the first floor and quickly spread through the wooden frame building...
>
> REWRITE: Arson investigators are now saying this morning's blaze which gutted a downtown Reading apartment building was not accidental."

A new development in a running story provides the lead in this example:

> ORIGINAL STORY: A local man who was trapped for a week in the crumpled wreckage of his small private plane was found this morning by an Air Force rescue team. 42 year old Robert Kelly was taken to the county hospital where he is listed in critical condition...

> REWRITE: That local man who survived for a week while trapped in the wreckage of his small private plane before being rescued this morning has died. 42 year old Robert Kelly died less than an hour ago from server internal injuries...

If there is no "real" new development in a story, it is possible to up-date the report by seeking opinions on the event from sources who might be affected.

> ORIGINAL STORY: Five New York City office buildings were ripped apart this morning by powerful explosives. At least ten people are feared dead. Police are not sure of the final death count since the rubble is still too hot to allow a search for survivors. A note delivered to a New Jersey radio station claimed credit for setting the explosions. The hand-written message was signed by a group calling itself the Liberation Force for a Free America...
>
> REWRITE: New York City police continue their search for those responsible for this morning's bombing of five downtown office buildings. A note from a group calling itself the Liberation Force for a Free America claimed responsibility for the multiple bombing that left at least ten dead. Police experts are working to determine, the source of the note which was delivered to a New Jersey radio station shortly after the bombs exploded.

Occasionally an important news story breaks too fast to permit investigation of its feature possibilities. If you find yourself stuck with little new facts or developments, you might simple retell the story in a different feature approach.

> ORIGINAL STORY: A freak combination of events has lead to the arrest of a local man on charges of fraud. It seems 23 year old David Rivers was sitting in a local tavern when he was approached by a stranger who...
>
> REWRITE: The old cliche "...never trust a stranger." proved true today and led to the arrest of a local man on charges of fraud.

We have already discussed the importance of localising news to your particular market. This technique can also be applied to rewriting from other media. For example, time magazine might feature a story documenting the problems of air pollution in New York City. An alert reporter reading the article might ask if the local area has the same problem, and if not, why not. An investigation might lead to the following feature piece:

While New York City, Washington D.C., and Los Angles might have their problems with smog… our area is relatively free of dirty air. To find out why, we checked with…

Very often a hard news story may jog the memory of one of the older reporters in the news room and lead to an historical feature piece which draws parallels between the present and the past and relates anecdotes brought to mind by the present event.

For example, the manager of your local airport announces that in two weeks there will be daily jet service to your area. Of course this announcement is news and you would cover it, probably including statements from airport, airline, and city officials about the reasons for and impact of the service. But you might also want to rewrite the story into a feature which highlights the historic development of air service to your city or area.

Jet planes will begin landing at Civic Airport next week. This does not sound like an historic event to those of us familiar with modern air travel. But to some of the older residents of our city who can remember when the airport was nothing more than the "back 40" whose sole population was a couple of red heifers and some scraggly sheep… we have come a long way in 15 years…

The reporter assigned to rewrite a news story must, of course, obey all the rules of good news writing. This means, among other things, that the story led must play up the feature of the item.

This is not as easy as it sounds since if the original was well written, the obvious feature angle will have already been exploited. It is the poorly written story that is the easiest to rewrite. With no new facts at his disposal, the reporter faced with a rewrite job must ask a number of questions before starting:

1. In the case of stories appearing in media outside the local area, is there a local angle that can be I played up?
2. Are there any other news stories that can be combined with the story to give an overall view of the event?
3. Failing the availability of other similar stories, can a comprehensive lead be written which will tie this report to others?
4. Did the original play up the real feature or is it buried some place in the article?
5. Is the original written in such a manner that it will be of interest to our audience?

As discussed in the previous section, the reporter who reads newspapers from other cities will occasionally run across an item that may be rewritten for local consumption:

> ORIGINAL: A nationwide contribution drive for the Heart Fund was officially kicked off here [Chicago] today. Goal of the campaign has been set at 50 million dollars for the Midwest region. Dr. Ronald Faster of Chicago was elected campaign chairman. Other officers include: William Douglas of Cincinnati, who will be area coordinator... Stephen Harris of St. Louis, chairman, and Helen McDonald of Columbia, Missouri, publicity director...
>
> REWRITE: (For St. Louis station) A local man... Stephen Harris... will be the state chairman of this year's Heart Fund charity drive. He was elected during kicf-off ceremonies held in Chicago recently. Announced goal for the nationwide campaign is set at 50 million dollars. Another Missourian... Helen McDonald of Columbia... was elected publicity chairman...

Combining Stories:

The following example shows how one writer combined two separate items into a single story:

> ORIGINAL: [from UPI] The San Francisco Giants announced today they have traded utility outfield Jesus Ramos to the Chicago White Box for three future draft choices and an undisclosed amount of cash... The San Francisco 49'ers say they are trading quarterback Billy Hargis to the Pittsburgh Steelers for a badly needed interior lineman...
>
> REWRITE: Trades are the big news today from the front offices of San Francisco's baseball and football teams... The Giants have traded utility outfielder Jesus Ramos to the Chicago White Sox... and the 49'ers got a badly needed interior lineman for quarterback Billy Hargis who west to the Pittsburgh Steelers.

Comprehensive Lead:

Often the writer's knowledge about recent events will help to prepare a lead that ties the single story to other events which have recently been in the news:

> ORIGINAL: A local high school student...17 year old Jane Miner...has been selected as the winner of the national "Girl of the Year" award. The straight—"A" student...who has also received prominent notice for her performance on the tennis team...will go to Washington, D.C., to receiver her award from the president...

Buried Feature:

If the writer of the original story has missed the feature, the task of rewriting the item is quite simple:

> ORIGINAL: The question of closing First Street was again the major bone of contention at last night's City Council meeting. Councilman John Older presented a list of arguments against closing the street, insisting that to do so would cost the city more than 100 thousand dollars in the near future. Speaking in favour of the closing was Councilman Welter Johnson who pointed put that closing the street would improve the flow of traffic in the downtown area. The Council voted five to two to submit the question to the voters in especial election set for March 25.
>
> REWRITE: The City Council has given voters the chance to decide whether to close First Street. Last night the council voted five to two to put the issue before the public in a special election set for March 25.

Local Interests:

Quite often a national story is written in terms of national interests. As previously pointed out, without additional facts, it is still possible to rewrite the story to spark the interest of local listeners:

> ORIGINAL: The Federal Budget Bureau disclosed today that the national cost of living level has increased five per cent in the past year...
>
> REWRITE: It's costing local residents five cents more this year to buy what cost a dollar a year ago. So says the Federal Budget Bureau which disclosed today its cost of living index rose by five per cent the past twelve months.

Many years ago when newspapers travelled in pony express pouches or dusty railroad mail cars, it was common for weeks to pass before details of an event reached San Francisco from New York City. This delay forced newspapers to emphasize the time element by using a dateline in the lead (London, Monday, Dec. 8 UPI) to tell the reader when the story was dispatched so he would know how old the report might be. Transportation and communication facilities have improved since the davs of the clipper ship but the dateline tradition continues in most newspaper stories prepared by the various press services.

Both UPI and A use the name of the day in their stories. This is in keeping with the special requirements of print journalism which, at best, is several hours old when it finally hits your front porch. Newspapers cannot, and never will be in their present from, a medium of immediacy. There is no possible way for them to match the swiftness of their electronic brethren by their very nature they are not expected to.

Broadcast journalists, however, are not shackled to the time consuming process of publishing a newspaper; their news is "right now." Therefore, it is usually not necessary to include the name of the day in each story, rather the word today suffices and for that matter, the words yesterday and tomorrow.

For example, a story appearing in the Tuesday morning edition of the local newspaper might carry the following item.

The City Council, at the end of Monday night's meeting, expressed unanimous support for the proposal submitted by Ecology Action, Incorporated which called for a city ordinance to forbid open burning during the summer months, a period of high air pollution.

The broadcaster might handle the same item in this manner the following morning:

> The City Council had given its unanimous support to a proposal from Ecology Action, Incorporated which is calling for a city ordinance to ban open burning during, the summer months...a period of high air pollution. The council took he action at the end of last night's meeting.

You will notice that even though the council's action took place in the past (Monday night), the broadcast version de-emphasizes this aspect of the story and instead brings it more into the present by the use of the present perfect verb has given. The exact time of the action is delayed until the end of the item.

A comparison of the other verbs in the sentence shows another standard broadcasting techniques which is different from newspaper style the use of present tense verbs instead of past tense.

As we have pointed out, the print media must use the past tense for a majority of stories because they are dated. But since broadcast reports are not dated to that extent what reads correctly sounds silly when spoken, for example, consider the statement: "The president said the thought the vice president was doing a good job." Read aloud, it makes one wonder if the president still thinks so. Of course he does, so say so: "The president says he thinks the vice president is doing a good job." If somebody thinks about something in the past, you can assume, unless you know to the contrary, that he still thinks so now.

Here's a few examples of how to make news more immediate for broadcasting:

> A newspaper press wire carries a story that the president has left Washington for his weekend retreat at Plains, Georgia. The newspaper has to write the story in the past tense because of the reason already discussed.

But radio and television are so much faster, they can report the news while the president is still enroute: "The president is flying to his weekend retreat act Plains, Georgia." Or we might use the present perfect and say: "the president has left Washington for his weekend retreat at Plains, Georgia." Or we might look to the future: "The president will arrive at his weekend retreat at Plains, Georgia, within the hour leaving Washington earlier this morning." You can emphasize immediately by verb, tense and by connecting it to some time reference such as:

> Moments ago…
> Just before news time…
> At this hour…
> At this very moment…

But overuse of these phrases should be avoided or they will become commonplace and lose their impact.

Another caution: occasionally, the text of a speech will be released for use before it is actually delivered. Think of how silly you will sound if you quote a speaker as having said something based on his printed speech, when it later turns out that during that speech he made some revisions and didn't say it. This situation clearly calls for a guarded use of the future tense: "The senator… in a speech to be delivered tonight… will call for increased support of educational programme." Or, "In a prepared speech scheduled for tonight, the senator will accuse." To protect yourself against changes in the speaker's prepared text, you should make it perfectly clear in your story that your information comes from an advance copy of the speech.

Sometimes it is necessary to mix past and present tenses to keep from confusing the logical order of the story, parts of which may appropriately be completed in the past while others are handled as on going items.

For example, in the following three versions of the story, notice that the past tense version has the least immediacy, the present tense the most, and the mixture of the two keeps the listener clear as to what action is continuing and which is completed:

> PAST TENSE: The president announced today he will address Congress next Wednesday on the current problem of school bussing. He said he would outline his administration's official position regarding the recent Supreme Court order calling for student bussing to insure racial balance in schools.
>
> PRESENT TENSE: The president is preparing a position paper on the current problem of school bussing which he will deliver during an address to Congress next Wednesday. In an announcement made this morning, the president says he'll outline his administration's official reaction to the recent Supreme Court order calling for student bussing to insure racial balance in the schools.
>
> MIXTURE OF TENSES: The president is preparing a position paper in the current problem of school bussing which he will deliver during an address to Congress next Winced. The president said today the report will outline his administration's official reaction to the recent Supreme Court order calling for student bussing to insure balance in the schools.

The last version emphasises immediately in the lead, then deals with the announcement in the past tense because the action is completed in the past.

A word of warning don't get carried away with this desire to put everything into the present tense. Don't use present tense verbs for events that logically belong in the past. In some stories, accuracy and clarity call for the use of past tense verbs. It is illogical and confusing to use present tense verbs to describe a past situation which is over and has no possible chance of continuing into the present.

It is impossible to give a list of situations that demand the use of the past tense. Each writer must use common sense to determine when past, not present tense, is called for; reading copy out loud will go a long way towards revealing these problem areas.

Consider the following item, a report of a fire which killed 12 and injured three, in terms of using past or present tense verbs. A five-alarm fire, which swept through a downtown apartment building last night, has killed 12 persons and injured the others.

It would be ridiculous to use the present tense to report this story:

A five-alarm fire, which is sweeping through a downtown apartment building last night is killing 12 persons and injuring three others.

However, it is possible to make the story have more of a sense of immediacy by using the gerund form of the verb. For example:

A fire-alarm fire swept through a downtown apartment building last night killing 12 persons and injuring three others.

Not only is the story more immediate, but I have saved one word, "which," and made the sentence flow more easily.

"Names make news," is a crite but true axiom for all forms of news be it newspapers, magazines or radio-television.

Everyone is interested in what other people are doing. And if that other person is known to the reader or listener, that interest is heightened. Next time you read your daily newspaper, notice how your eye and attention are captured by headlines that display the name of someone, something, or someplace that you are familiar with. The same is true for radio and television, only the rules covering the use of names are a bit different.

In newspaper copy it is the name in the lead that grabs the reader's attention. But in broadcast news, if you lead with the name, the listener isn't "ready" for it and he will probably not hear the name and will then spend the rest of the story wondering who you are talking about.

Therefore, it is essential to "cue" the listener that a name is coming up in the story. You do this by simply using a descriptive phrase before the name. Consider the following newspaper item about a narcotics raid that featured the arrest of the mayor's son:

Thomas Joseph, 23, the son of south Rafael Mayor Robert Joseph was among 25 college students arrested last night by local police in a series morning before Judge harem Gubbins in Butte County superior Court, and charged with three counts of marijuana possession. The other students, there is nothing wrong with this item, for newspapers that is; but, if you were to read it on a radio newscast most listeners would miss the name of the mayor's son since they weren't "prepared" to hear it. This problem can be solved by writing the item which also includes a shifting of events to "up-date" the story:

The son of South Rafael Mayor robert Joseph has been charged with three counts of marijuana possession. 23 year old thomas Joseph appeared before Butte County Superior Court Judge Harem Gubbins for arrangement after he was arrested last night during a series of raids on numerous local student living centres. Joseph was among 25 students arrested on various narcotics violations…none of the others have yet been formally charged.

Notice I have delayed the name until after the identifying phrase, and then repeated the name a second time for good measure.

The general rule, then, is to delay most names (of people, places, and things) until the second or third sentence. Of course, if the name is widely known and is an attention getting device on its own, then it is permissible, for it to begin the story. For example, it would be foolish to delay the name in the following item doing so might border on the absurd:

The president is scheduled to talk to the astronauts late the evening to offer his personal congratulations for a successful moon landing.

Rewriting to delay the name might give you this:

The president of the United States is scheduled to talk to the astronauts late this evening. He will offer his personal congratulations for a successful moon landing.

But if you do lead with a name, make sure it is well known to all your listeners. Those who know the name don't be insulted by the delay of that of that name, but) those who don't will be upset by missing it.

Sometimes, its better not to use names at all, especially when the story includes no local persons. For example, a report of an airplane crash in Chicago which kills 135 passengers is important, but the names are meaningless to your non-Chicago listeners. Thus you should just feature the number of passengers rather than the names. Of course, you should scan the passenger list to make sure no local people are involved. If they are, then their names would be prominently featured.

The following story on a massive train wreck in the Midwest moves on the wire services. Down near the bottom of the story, the name of a local person is listed as being among the dead. An alert writer would move the local angle into the lead and write the following:

A local businessman is listed as being one of the 85 victims of today's massive train wreck in millions. 35 year old Gregory Henderson died in the explosion that followed the two train calcine.

You will note that even in this story, the name has been delayed until the later part of the lead sentence.

Newspapers, in their desire to be accurate and keep true historical records, give the full names and addresses of all persons involved in the news, especially local stories. Radio and television, on the other hand, handle full names and titles a bit differently. Use them for what they are, for properly identifying people. Try to avoid getting bogged down in a maze of confusing titles and middle initials. Radio and television news omits middle initials and unless they have become widely known as an integral part of the name, such as Toward K. Smith, John L. Lewis, J. Paul Getty, etc. The same rule applies to run names they would only be used when the person is normally identified in that manner: Henry Cubit Lodge, George Bernard Show, William Jennings Bryan, etc. By and large, however, the use of the middle initial or the full name on the air simply clutters up the copy and confuses the listener, and is not at all necessary for proper identification. Herbert C. Hoover, Richard Milhouse Nixon, Lyndon Baines Johnson all add nothing and merely require the listener to pay more attention to detail.

In conversation, as well as broadcast writing, use titles before names unless the structure becomes awkward (another reason to read copy out loud as you write). Putting the title first makes the copy flow instead of breaking it up with a lot of unnecessary commas:

NEWSPAPER: Robert M.Jones, regional director for the Federal Narcotics Bureau, said today...

BROADCASTING: The regional director for the Federal Narcotics Bureau Robert Jones said today...

NEWSPAPER: Senator Alien Cranston (Dem. Cal.)

BROADCASTING: California Democratic Senator Alien Cranston.

NEWSPAPER: Frank R. Blythe, chairman, General Motors Buick Division, said today in Detroit...

BROADCASTING: The chairman of General Motor's Buick Division Frank Biythe said today in Detroit...

Note how the restructuring of the sentence eliminates the commas which makes the copy flow and sound smoother to the ear of the listener. But remember that sometimes putting the titles first makes the sentence sound jarring. If that happens, put the name first. The cardinal goal is clarity not blind faith in a style book.

As far as repeating the titles in a second reference is concerned (such as Captain smith), broadcast writers usually don't with few exceptions.

Generally, always use a title for the president of the United States every time his name is used. Call him President Carter or Mr. Carter, this editorial privilege is normally not accorded to anyone else in public office except where local practice dictates otherwise.

Another exception is in the naming of clergymen. It's common practice to use a title for members of the clergy each time their name is used.

> EXAMPLE 1: A Chicago soldier, Army Captain Louis Haynes has been formally charged with desertion of duty…Haynes is being held at Fort Monmouth, New Jersey…
>
> EXAMPLE 2: San Francisco surgeon Dr. Susan Taylor has been elected president of the American Medical Association during the group's annual meeting in Pittsburgh. Taylor is a member of the University Board of Surgery.
>
> EXCEPTION 1: President Carter today lashed out at his political opponents, calling them politically native. Mr. Carter made the remarks during a breakfast at the White House. The president was reacting to…
>
> EXCEPTION 2: A Birmingham, Alabama minister the Reverent Mr. William Brace has pleaded guilty to disorderly conduct after he was arrested for leading a recent voter registration march through the city's downtown area.

Often it is better to substitute titles for names. This is particularly true when the name is obscure, hard to pronounce, or not needed for understanding the story, and especially when the news concerns the office rather than the office holder. Common sense will tell you that it is almost meaningless to bother your listeners with the names of government officials from foreign countries when they probably won't remember the name any way. The same thing can be said for the names of minor government officials in our own country.

So, while newspaper editors insist on printing the full name and title of all officials, radio and television can, and do, leave out obscure names:

> NEWSPAPER: Julio Jimenez, the conservation director of Mexico, said smog is threatening Mexico city.
>
> BROADCASTING: Mexico's director of conservation says smog is threatening Mexico City.
>
> NEWSPAPER: Sir Malcolm Smythe, under secretary to the prime minister of New Zealand has announced a new trade agreement with the United States.
>
> BROADCASTING: The under secretary to New Zealand's prime minister has announced a new trade agreement with the United States.

Do not substitute titles for names without first making sure that the name itself won't mean anything to the listener and that the title is more important than the name.

Be careful about running too many titles and names closely together; it will only be confusing. Consider the following:

> Secretary of Interior Roger B. Hodges announced that William Jarvis, chairman of US Steel, had succeeded Ralph, J. Cordiner, chairman of General electric, as chairman of the president's business Advisory committee.

A sentence like that is jarring and totally confusing. The average listener will get absolutely nothing out of the item; there's just too much information in too short a time.

Never refer in your copy to "the former" of "the latter." The words are only useful in print where the reader can look back to see what you are referring to. In broadcast writing, this is impossible and asking the listener to. do so will only lead to confusion and frustration.

To maintain radio and television's role as a credible source for news, it is essential that the writer tell to listener the source of information. The writer must be sure that there is no confusion in the listener's mind as to whether the newscaster is speaking personally or for a news source.

Because of the characteristics of the broadcast medium, it is confusing to the listener to hear the source for a statement at the end of that statement. To make the source perfectly clear, experienced radio-TV writers generally place the source first instead of in the middle or at the end of the sentence, as is done by newspapers. There are four general rules to follow until are thoroughly familiar with the demands of broadcast journalism.

1. Never start a story with a starting statement and then add the source at the end. The listener in his excitement may miss it. Be particularly careful about leading with statements that may mislead your listeners.
   POOR: This means all-out was with the soviet Union." At least that's the opinion of Congressman Ron Dellums who appeared before the House Armed Services committee today.
   BETTER: congressman Ron Dellums told the House Armed Services committee today and these are his exact words: "this means all out war with the soviet Union."
2. Avoid identifying the source of the statement within the sentence, unless it is essential to break up long quotations.
   POOR: "The only way to end the war," said the president, "is to reach a mutual agreement with the enemy over the disposition of the neutral area?"
   BETTER: The president said, and we quote: "The only way to end the war is to reach a mutual agreement with the enemy over the disposition of the neutral areas."
3. Avoid leaving the name of the source for the end of the statement. By then it may be missed my many listeners. It is also difficult for the listener to know what part of the sentence is the direct quote if the source for the statement comes last.
   POOR: "Last night's narcotics raid was the result of six-months under cover investigation by our department into the widespread use of hard drugs in local high schools," said county sheriff Jack McIntyre.
   BETTER: County Sheriff Jack, McIntyre said, and, we quote, "Last night's narcotics raid was the result of six-months under-cover investigation by our department into the widespread use of hard drugs in local high schools."
4. Unless it is awkward, always try to have the source of your information at the beginning of the sentence so your listener is clear as to the credibility of your society.
   POOR: The number of oil slicks along the Pacific coast in the past year is the highest recorded since such records were kept, said University-Berkeley, Robert Waldman.

> BETTER: A biologist at the University of California-Berkeley, Robert Waldman, says the number of oil slicks along the Pacific coast this year is the highest recorded since such records were kept.

Obviously, if all your writing were restricted to the rules of the style guide, it would very quickly become dull and trite. Variety is essential, but at the same time, there are certain errors which must be avoided.

A good technique in naming the source for a number of quotations, instead of just repeating the name, is to use each quote as an opportunity to supply additional information. The following example shows one way of doing it.

One of America's foremost anthropologists, Margaret Mead, has told a Senate sub-committee on drug abuse that marijuana should be legalized. The 74 year old pioneer investigator of primitive societies warned the senators that, and these are her exact words, "The continued prohibitions against marijuana are doing greater damage to the nation than the harmful effects of marijuana itself."

Dr. Mead who has an international reputation for her work in modern health problems feels that the, charge that the use of marijuana leads to heroin is sheer folly…

You will notice that not only have the listeners learned what Dr. Mead's opinions on marijuana are, but they have also learned something about Dr. Mead's qualifications.

This technique is a very handy one to use, but there are certain pitfalls, which should be avoided. Note the following sentence which strives for variety but ends up merely confusing the listener.

The chairman of the subcommittee ordered the hearing room cleared of the noisy protesters. Senator Edward Kennedy told the audience he would not tolerate further interruptions.

It doesn't necessarily follow that all your listeners know that Senator Kennedy is, in fact, the chairman of the subcommittee; it is highly probable that most of them do not. Thus, a sentence like this merely frustrates rather than informs. Why not try it this way if you want variety.

The chairman of the subcommittee ordered the hearing room cleared of the noisy protesters. Chairman Edward Kennedy…who had called the investigation at the request of the president…told the audience he would not tolerate further interruptions. Another example may help to clear up any confusion you have:

A spokesman for the tire manufacturers drew a sharp attack from the chairman. William Bryant said he was tired of hearing testimony.

At this point, ask yourself, who is William Bryant? Is he the spokesman or the chairman? If you are confused, think of your poor audience they must be totally lost. Why not write the sentence this way to clear up the ambiguity.

So far we have been talking mainly about the rules for quoting sources. But is it always necessary to give attribution? When can you leave out the source?

Obviously, if there is any question about the credibility of a statement, then attribution is a must. But, in general, the move is definitely towards cutting down the number of times the source is given.

Too much attribution slows the pace of the story. It gets in the way of the action, the colour, and often confuses rather than clarifies.

The most obvious place to cut down on attribution is in the writing of "official" pronouncements from government offices. As an example, here's a story as it appeared in a newspaper.

U.S. Secretary of State Cyrus Vance today said this country will support a resolution to be introduced into the UN Security council next week by France to seek total disarmament in the middle East. Vance made the announcement to reporters during his weekly news conference in Washington.

Because this is an official announcement, it could be written without attribution in the lead:

The U.S. will support a French resolution to seek total disarmament in the Middle East which will be introduced into the UN Security council next week. Secretary of State Cyrus Vance made the announcement this morning to reporters during his weekly news conference in Washington. The radio-TV writer should postpone attribution in a story only when there is no question of the credibility of the source, for example, if the president announces he will make a speech to Congress, it is not necessary in the lead to write—"The president says he will." It is sufficient to say, "The president will make a speech to congress."

As was pointed out before, the name of the source (especially in foreign news) is often less important than their title or position:

POOR: Sir Georges Avadon, under-secretary to the minister of defence for Great Britain, said today his country will.

BEST: Great Britain will (leaving source understood).

While it is permissible to leave out the source for "official" news, it is essential that you attribute all statements of opinion-especially when there may be doubt as to their credibility:

POOR: American auto manufacturers are the major stumbling blocks to establishing proper pollution controls in this country.

BETTER: The director of Ecology Action, Incorporated today charged American auto makers with being the major stumbling blocks to establishing proper...

In the second sentence, there is no longer any question in the listener's mind as to whether the attack on the auto makers is your editorial comment or the opinion of someone else.

In addition, naming the source can often make the difference in the news worthiness of a story. If General Motors is accused of poor quality control by a member of a consumer group, the story is less "important" than if the same charge from the president of the United States.

Said and Its Synonyms

The beginning writer will sooner or later run into the problem of too many "he said" in his stories.

Concerned about using the same phrase over and over again, the writer searches vainly for synonyms for said. This search can often lead into troubled water because, no matter what some experts say, there are a number of words that just don't have the same connotation as the word said. The word said is very often the best you can use and don't hesitate to repeat it if necessary. Its use has become an acceptable convention and few listeners will object to its overuse, especially if synonyms could the true meaning of the story.

Many times you will feel the urge to use words like added, asserted, averred, stated, etc., as substitutes for said. Don't. They do not have the same meaning. To say that a speaker "went on to say." or that he "added" indicates to the listener that the statement was an after thought.

If you feel you have to use a substitute for said, choose one that adds accurate description or colour to your story.

POOR: The mayor said in a speech to the Rotary Club this morning she will support the city's drive for cleaner streets.

> BETTER: The mayor promised the rotary Club this morning she would support the city's drive for cleaner streets.

Substituting forceful verbs, as was done in the above example, is a good technique but care should be exercised against changing the meaning of the sentence. In the second sentence you would not want to use the word disclosed instead of promised because it has a different meaning. It indicates that the mayor was revealing some secret information or feeling she had hot publicity admitted before.

By the way, the use of the word add is another writing pitfall that often traps the beginner. The word should only be used in place of said when the second statement does, in fact, amplify, expand, or illuminate the first statement.

> POOR: The police chief declared [why not said...declared is a bit formal] crime statistics for the city show a decrease in armed robbery. Stunners, he added have suffered fewer dollar losses in the past month than for the same period last year.

Added is improperly used in the example. The last statement does not add anything to the first sentence: it is merely a continuation. So why not write it that way:

> BETTER: The police chief said crime statistics for the city show a decrease in armed robbery. Stunners, he pointed out have suffered fewer dollar losses in the past month than for the same period last year.

Complete reporting also requires the use of direct quotes, which leads to another problem. How can you handle direct quotes, since the listener can't see quotation marks? It would be possible to say "quote-unquote" before and after every direct quotation, but that technique interrupts the flow of the story and jars the listener, fortunately- for you and your audience, there is an easier, more pleasant way of including direct quotes in your stories.

While it is impossible to tell you how to handle every situation, there are some general guidelines which will go a long way towards helping handle direct quotes with a minimum of effort:

1. Do not use long direct quotes. It is impossible for a listener to follow a long, complex statement. It us much more effective to break them up, into indirect quotes by paraphrasing the source.

2. If it is necessary to use a long quote, break tip by naming the source a number of times during the quote.
3. Always indicate to the audience exactly when the quoted material begins and ends. But avoid, if possible, the use of quote and unquote.

Let's look at each of the guidelines in detail.

The use if long, direct quota is appropriate for the print media. In radio-television writing the practice leads to awkward and confusing copy. The following example would wreak havoc in the listener's mind:

> NEWSPAPER: Warren Stevens, director of the College Housing, said, "The main problem we face in our college housing is the lack of appropriate safeguards to ensure our students that the apartments and houses they rent during the school year will measure up to at least minimum health and safety standards as established by the state health department last year."
>
> BROADCASTING: The director of college Housing Warren Stevens said the major problem his office faces regarding college housing is the lack of appropriate safeguards to ensure that apartments students rent will meet minimum health and safety standards, Stevens pointed out that these requirements were set by the state health department last year.

Notice how I have paraphrased the long quote and broken it up into two sentences bridged by a second identification of the source.

If you can't use "quote-unquote." How do you tell the audience you are reading a direct quote from a second source? You do it the same way for radio and television that you do in conversation. When you talk to someone, you don't say "quote-unquote" when you are passing along statements from a second party. You use phrases such as in his words, as he put it, or what he called. The list is endless, but these phrases plus your inflection indicate to your listeners where the quote begins and ends. An example might make this technique clearer:

> POOR: The president of General Motors said quote our company is spending millions attempting to solve the problems of air pollution caused by gasoline engines unquote.
>
> BETTER: The president of General motors said, and these are his exact words: "Our company is spending millions attempting to solve the problems of air pollution caused by gasoline engines."

It is even better to avoid the use of direct quotes. In the above examples, there is no real reason for quoting the president of General motors directly, so why not simply paraphrase his statements. Direct quotes should only be used when it is essential that you give your audience the exact language of the statement.

The president of General Motors pointed out his company is spending millions of dollars attempting to solve the problems of air pollution caused by gasoline engines.

On occasion you may run into a direct quote that attaches a label to someone or something. For example, a senator may call the president's State of the Union message an "historical document" while another may label it an "evasive statement which avoids confronting the nation's problems. Instead of using direct quotations, it is possible to write your story in such a way so that listeners will understand that you are quoting the source, not editorializing:

> The senator called the president's message "an historical document." On the other side of the aisle, however, another senator described the State of the Union speech as an "evasive statement," one which in the senator's words—"avoids confronting the nation's problems."

When you are forced to use a long quotation that is impossible to paraphrase, it is essential that you insert a phrase that identifies the source every three or four sentences to remind the audience that you are reading a direct quote. For example:

> The senator went on to say...
> The senator continued...
> Turning to another topic...
> The senator added...

There is another point to remember when dealing with quotations. Be careful where you place them; use them in full sentences or not at all. If you are careless, you might create this confusing statement which recently cropped up in a radio-news cast:

> The governor told newsmen, I will do exactly what I've been doing-nothing more, nothing less."

Read that sentence out loud and you will immediately hear the confusion which can result. The audience, unable to "see" the quotation marks, might think the "I" refers to the newscaster, not to the governor. Using half quotations of this sort is simply lazy writing. Why not write in this way and clear up any possible confusion:

> The governor told newsmen he will do exactly what he's been doing-nothing more, nothing less.
>
> Sometimes the use of half quotations can border on the ludicrous, there was another broadcaster, reading a story referring to the confession of a female murderer. The script read: "She said, did it." (She didn't say that; she said she did it.)

The various techniques discussed so far will give the audience a clearer understanding of the day's news. All of them mirror to some degree the basis of conversational language. The use of contractions (don't for do not, doesn't for does not, etc.) heightens the similar between broadcasting and conversation. It is perfectly acceptable style. The rule then, is to use as many contractions as logically fit into your copy.

When we are talking we seldom say "he will" or "I am" or "he is." We say "he'll" or "I'm" or "he'." Since broadcasting tries for the informal, your writing should be liberally sprinkled with these contracted forms, such as:

Don't instead of do not
Won't instead of will not
Doesn't instead of does not
Isn't instead of is not.

In the following examples, notice how the verbal sound flow of the newspaper copy is improved by substituting the proper contractions:

> NEWSPAPER: Sources in Washington said today Congress will not approve the president's latest demand for a $5 billion cutback in the federal welfare programme. The president told reporters today he will make a personal appearance before a joint congressional session sometime next week to seek the welfare programme cuts. The Senate will not begin hearings on the measure until next month, and experts do not expect any funds to be chopped from the programme. Meanwhile the speaker of the house told newsmen he is sure the House will back the White House in seeking the cuts.
>
> BROADCASTING: Sources in Washington say Congress won't approve the president's latest-demand for a five billion dollar cutback in the federal welfare programme. The president told reporters today

> he'll make a personal appearance before a joint congressional session sometime next week to seek the welfare programme cuts. The Senate won't begin hearings on the measure until next month, and experts don't expect any funds to be chopped from the programme. Meanwhile, the speaker of the house told newsmen he's sure the House'll back the White house in seeking the cuts.

Just a word of caution. Don't get carried away with contractions. There are times when you will want to say "did not" instead of "didn't" for emphasis. It is impossible to spell out when you will want to avoid contractions; it depends on the mood of the story and its subject matter.

You should not use contractions inside direct quotes if the original quote did not use them. The speaker had some reason for using the words he chose, and you should not change them in any manner.

Because broadcasting involves a great deal of showmanship (unfortunately), news writers must use attention-getting devices throughout their copy; and one of the best is colour.

Conversation is more colourful, more picturesque than the written word. When we speak to someone, we are more likely to use forceful verbs, descriptive adjectives and short sentences. A good news story will include these same ingredients to paint more colourful, meaningful word pictures. This is especially true in radio where your audience cannot see what you are describing; they rely on you to draw them a sound image of the news event.

There is no better way getting colour into your copy than through active verbs. They are more effective than the easier to use adjectives because they create a feeling of action.

When you write your news stories, never forget that you are writing about humans, their trials, their motions, their faults, their inhumanity. These events have emotional impact. Often they are not "nice" stories. There is nothing pleasant about the killing of 100 innocent persons in an airplane crash. If the story demands strong language (not profanity), then use it…

When you write, get some feeling into your writing. Use verbs that tell the story. Avoid adjectives if you can; they weaken the flow of the story. If you can find a verb that can take the place of an adjective, use it.

The use of short, simple sentences goes a long way to energizing your story. Try to avoid the use of complex dependent and independent clauses; they merely confuse the listener. Try to make sense out of this paragraph.

Using Senator Robert Knight's familiar, and often successful technique a television interview California Republican congressman Henry Johnson charged in a voice strained with contempt-that...

Another effective way of getting more colour into your writing is to avoid the negative aspect of a story. The beginning sentences of a story that focus on the negative may be dull. It's much like telling the listener that nothing is going to happen. The skilled writer try to translate the negative into the positive.

> POOR: The president told newsman today he will not oppose the attempt by Congress to change the voting requirements for Negroes in the south.
>
> BETTER: The president told newsmen today he will refuse to oppose the attempt by congress to change the voting requirements for Negroes in the south.
>
> POOR: Inside sources say the county grand jury won't bring criminal charges against 12 persons arrested last week on various drug charges.
>
> BETTER: Inside sources say the county grand jury will drop plans to bring criminal charges against 12 persons arrested last week on various charges.
>
> POOR: The governor revealed today he won't go to Washington tomorrow to seek presidential intervention to get that 9-billion dollar defense contract for California's missile industry.
>
> BETTER: The governor revealed today he is cancelling plans to go to Washington to seek presidential intervention to get that 9-billion dollar defense contract for California's missile industry.

Obvious, it is unwise and impossible to convert all negative leads into the positive. Again, it is left to your judgement, but it can be done frequently and effectively.

One other fault common with beginning writers, and one that makes for dull writing is the use of the passive voice rather than the more action oriented active voice.

In the active voice sentence, you have the subject doing something: "John hit the ball." In the passive voice, you have something being done to the subject.

"The ball was hit by John." Admittedly these examples are a bit simpleminded, but the principle also holds true for more complex constructions.

POOR: The housing legislation, which was passed by the Senate this morning, will be acted on by the House later this week.

This entire sentence is in the passive voice (and emphasizes an old angle). Putting in the active voice gives the story a feeling of action:

BETTER: Later this week the house will act on housing legislation the Senate approved this morning.

Be constantly on the lookout for the passive voice, it dulls your copy:

PASSIVE: The bill was passed by congress.
ACTIVE: Congress passed the bill.
PASSIVE: The car was crushed by the truck.
ACTIVE: The truck crushed car.
PASSIVE: Signed into law by the governor, the bill takes effect tomorrow.
ACTIVE: The governor signed the bill which takes effect tomorrow.
PASSIVE: The suspect is being questioned by police.
ACTIVE: The police are questioning the suspect.

Although colour is essential to a good news story, sometimes too much colour can be confusing to your audience. A particular danger crops up when you use adjectives, especially strings of them to modify one subject. The phrase, "the handsome, rugged building supervisor," can be a confusing image to grasp. What is handsome and rugged; the building or the supervisor?

So far we have been talking about the various parts of a news story written for radio and television. Now it's time to look at the story in its entirety.

Again it must emphasize that broadcast writing is writing for the ear. Listeners do not have the luxury of going back and "rehearing" what they missed the first time. It is essential that your stories be crystal clear. It is imperative that your writing be as/ simple as possible.

As you write each story remember that you are writing for a listener that may be half-deaf with the maturity of a nine year old. Your stories must be simple enough to reach this listener. Yet, at the same time, they must be intellectual enough to reach the 45 year old corporation executive or the college professor.

We are not suggesting that your writing be couched in fifth grade terminology. All I'm saying is that if you err, it is better to err on the side of simplicity. The banking executive won't get too upset if the story is told in elementary terms, but your half-deaf mental incompetent will be completely confused if your writing is complex.

What you must accept is the hard fact that a small segment of your audience uses the other media (newspaper, magazines, books, etc.) to supplement your reports. The major share of your audience unfortunately relies almost completely on the broadcast media for its news. If they don't get it from radio and television news, then they don't get it at all. Hopefully this dependency on the electronic media as a single news source will continue in the future, but all present indications point to the fact that the trend will continue and grow stronger.

So it is your obligation to put the day's news in terms that the average person in the street will understand and listen to.

If you read aloud to some friend a news story from your local newspaper, he will probably miss mastiff the major points first time through. He just can not cope with the complex style that is the hallmark of most newspaper writing. Rewrite the same story in simple everyday language and your friend will have a much easier time of it.

For example, a newspaper account of a battle action might red:

> An estimated force of 1350 pro-Marxist rebels struck hard a government positions in various locations throughout the cease-fire zone in Angola yesterday. Heavily damaged, were numerous government fuel depots, trucks and light armored vehicles. Rebel losses were described as minor.

The average person might start his account this way:

Obviously, you wouldn't write your news story in such as off-hand manner. But you could blend the formal newspaper approach with conversational style to create this version:

> Pro-Marxist rebels struck hard at government troops in Angola yesterday. Some 13 hundred rebels attacked in various locations throughout the cease-fire zone. Numerous government fuel depots, trucks and light armored vehicles were heavily damaged. Rebel losses were minor.

The easiest way to simplify your stories is to simplify your sentences. Most of our everyday sentences are simple declarative statements-subjects, verb and object. Your writing should reflect this practice.

But don't get carried away. You can fall into the habit of short, jerky, disconnected thoughts and sentences. Your writing should flow smoothly from one thought to the next from one sentence to the next, from one paragraph to the next.

Once good technique for achieving this compromise between flow and simple construction is talking to your typewriter while you write. Read each sentence out loud as you pound thatches. And after you finish writing a paragraph or two, go back and read it again to make doubly sure it makes sense and flows.

Many beginning writers find it necessary to prepare a rough draft of the story before they type the final version. This may work for preparing essays or other leisurely forms of writing. But when you are writing a news story against the pressures of a time deadline, you simply cannot afford to waste effort producing a rough draft.

You must train to write the final version the first time. Before you begin to write, take a moment or two and think about the approach you will use, what your mind then, and only then, should you begin to write.

The only way to learn this skill is to practice writing. It is impossible to learn how to write without spending time at it. After all, you wouldn't expect to learn to play the piano by just reading a book, so how can you expect to learn write without hours of practice, correction, review, and more practice.

There are a few specific don'ts which should be learned:

1. Don't start a sentence with long, modifying clauses:
   POOR: Despite complaints from student militant groups and urgings from conservative forces for more stringent action against campus violence, the governor is refusing to issue a policy statement.
   BETTER: The governor is refusing to issue a policy statement on the current problem of campus violence despite complaints from student militant groups and urging from conservative forces for more stringent action.
2. Don't, leave clauses or attribution dangling at the end of a sentence:
   POOR: There are now more than four radio receivers for every American man, woman, and child according to a report released recently by the US Census Bureau.

BETTER: A report recently released by the US Census Bureau says there are more than four radio receivers for every man, woman, and child according to a report released recently by the US Census Bureau.

BETTER: A report recently released by the US Census Bureau says there are more than four radio receivers for every man, woman, and child in America.

3. Don't place a lot of confusing clauses between the subject and the verb:

   POOR: The president, obviously upset over the refusal of congress to approve his massive welfare programme last week and its approval of cuts in the unemployment compensation programme, says he will appear on national radio and television tonight to plead for public support.

   BETTER: The president will appear on national radio and television tonight to plead for public support after Congress turned down his massive welfare programme last week and approved cuts in the Head Start programme.

4. Don't use strings of dependent clauses. Make separate sentences:

   POOR: The mayor of San Francisco, who took office less than a year ago, surprised reporters by announcing he would not be a candidate for re-election because he feels the public has lost faith in his administration over its handling of the recent municipal workers strike.

   BETTER: The mayor of San Francisco surprised reporters this afternoon by telling them he would not be a candidate for re-election. He said he had decided against seeking a second term because he thinks the public has lost faith in his administration. The mayor said the public is upset over the way he handled the recent city worker strike. The mayor has been in office less than a year.

When you start a journey, you must take the first step. The same applies to news stories. The first thing you must write is the lead. If you do not catch the interest of your audience with first or two, you have lost them for the rest of the story.

Actually, the use of the term lead in broadcast journalism is misleading (no pun intended). The term originated with newspapers. It was developed to suit the mechanics of that medium.

It was a specialized and somewhat artificial method of getting into the first paragraph of a newspaper story all the essential information about the event. This was done to attract the reader's attention and to allow copy editors to cut the story at the end of the first paragraph and still retain the "meat" of the item.

However, if broadcast writers try to cram the "who, what, when, where, why and how" of an into the first paragraph, the story becomes cumbersome, awkward to read and very confusing.

In the early days of radio-news reports consisted simply of reading the local newspaper verbatim, a practice still common at many small stations. But announcers soon realized that it was impossible to read the fact-crammed leads and awkward newspaper style. Copy written for the eye just could not be delivered for the ear in an understandable fashion.

So over a period of time radio writers developed their own style of lead writing, one that caught the listeners attention, eased him into the story with one or two important facts and prepared him for other facts which followed.

The philosophy of the radio, or "soft," lead is fairly simple. The ability of the human brain to receive and understand audio information is limited in terms of the amount of material that can be assimilated over a given period of time. And, more importantly the brain must be alerted and prepared to "hear" this information. So it is the function of the "soft" lead to alert the listener that something is going to be said that is important. But that alert must be kept fairly simple and interesting to arouse that interest and maintain it.

There is another important reason for the "soft" lead. Listening to the radio, unlike reading the newspaper, is often done in a subconscious manner. People listen while they are doing something else. Listeners may be day-dream, eating, driving a car or even reading a newspaper. They only half listen until something is said that grabs their interest and makes them want to devote their full attention to the story.

Users of all media-print and broadcast select what they want to read or hear on the basis of their own needs or interests. No matter how important a story might seem to you, if your audience hears nothing in it that involves them in some way, they won't pay attention to it. Radio-news, like printed news, competes for the attention of its listeners. To get attention, stories must be interesting, colourful, easy to understand, and above all, put in terms that will make the item important and meaningful to listeners in terms of their particular needs.

The only way to determine those needs is to know the audience is primarily rural in nature, you would select and edit copy in terms of agricultural interests. On the other hand, the audience might be composed mainly of middle class white collar workers situated in a suburban area. This audience needs a different approach to the news from its rural counterparts. Each audience is different and for a news operation to be successful it must be planned with its audience in mind.

As you write each story remember your listeners and ask "What is there about this event that will interest them?" "What do my listeners consider important... what do they need to know about the event I am reporting?" Since people listen to the radio in a half-hearted manner for the most part, it is essential to snare, the undivided attention of your listeners without giving them facts they will need later on to understand the news.

The newspaper writer can cram all the information into a lead and rely on the headline to grab the reader's eye; and, if something is not understood the reader can go back and check the story again.

The broadcast writer must always remember that listeners may not hear those first few words because they weren't paying attention, therefore, it is essential that you "warm-up" the listeners by telling them what is coming next.

Not only must you alert listeners to pay attention, but you must make the story interesting enough to make them want to pay attention. Fail to do this, and you have lost them for the story and perhaps the entire newscast. The lead sentence in a radio-news story is much like a newspaper headline. It demands attention and prepares for what is to follow.

We have already discussed the guidelines concerning the use of names and titles, and nothing would be gained by repeating that advice here. Suffice to say that the rules governing the starting of a sentence with a name apply even more to the starting of a story. The only exception would be when the name is so familiar to your audience that is acts as a cue to what is to follow.

> **POOR:** Robert Martin, a professor of mass communication at Chico State College, will spend a year in Africa under a grant from the United Nations.

BETTER: A Chico State College mass communications professor, Robert Martin, will spend a year in Africa under a grant from the United Nations.

POOR: Miss Stephanie Bradley of Boise, Idaho, was selected as this year's Miss America last night in Atlantic City, New Jersey.

BETTER: A Boise, Idaho, girl. Miss Stephanie Bradley was selected as this year's Miss America last night in Atlantic City, New Jersey.

We also recommend that you don't start your story with statistics. Since listeners are not "ready" for the information, they will miss it completely and spend the rest of the story wondering what you are talking about.

POOR: Twelve persons are dead and 30 others seriously injured following the latest outbreak of violence in the riot-torn streets of Detroit.

BETTER: The latest outbreak of violence in the riot-torn streets of Detroit has left twelve dead and 30 others seriously injured.

POOR: One thousand high-school volunteers rang some 10 thousand door bells last night and collected over 35 hundred dollars for UNICEF.

BETTER: Local high school students did their good deed last night as some one thousand volunteers rang some 10 thousand doorbells and collected over 35 hundred dollars for UNICEF.

There are a number of specific techniques a broadcast writer can use to "warmup" an audience. Which one to use in a particular situation can only be learned through experience?

However, one useful approach especially when you have a number of items relating to the same event is the "round-up" or "umbrella" lead. This alerts the listener that there are a number of related stories to follow.

There are new developments tonight in Washington, New Jersey, New York, and Georgia over the natural gas shortage.

President Carter authorized the shifting of gas reserves from one state to another.

Gas reserves from Oregon, Washington State, and California will begin to flow into New Jersey where business were given this ultimatum: either restrict their hours to 40 a week, or lower their store thermostats to 50 degrees.

New York City's Sanitation Department has sent a 20 person "Snow Liberation" crew to the hard hit buffalo area.

And in Carter's home state of Georgia, Governor Busbee wants the authority to regulate the temperature of private homes and industrial buildings. Meanwhile, the President has asked all Americans to turn down their thermostats.

The Memorial Day weekend is over and the state highway death toll is at an all time high as 23 deaths were recorded during the 48 hour period.

In Macon, three persons died when their small truck ran off the highway...

Six teenagers died after their car was struck by a train...

A family of four perished when their car was struck headon... [and the rest of the story would continue to describe each accident if they were of local interest.]

Sometimes the "umbrella" lead. This is not appropriate. In that case, you might try what is called "throw-away" lead. This is a lead sentence which "sets up" the listener for the story. It is not really the true lead which is usually the second sentence or paragraph; hence the name "throw-away." For example:

The county board of supervisors surprised everyone... including themselves it seems... by voting unanimously to turn down a request to construct a massive housing complex on the banks of the Chico River.

By a vote of six to nothing, the board said no to contractor William Rivers who had sought permission to build some one thousand homes along the river banks. Speaking for the board, Supervisor Thomas Roas said and we quote "Such a project would be detrimental to the health of the river and would increase the chances of pollution... a situation we cannot allow."

An east bay newspaper editor has strongly criticized the recent action by radical groups against the University of California-Berkeley.

Appearing on CBS's "Face the Nation," Oakland Tribune editor Lee Merry charged that radicals are in his words, "deliberately provoking the University of California into a police action..."

The state may be in financial hot water in the near future if a local grocery store owner wins his court hearing seeking to overthrow the state's right to collect sales tax.

The storeowner...Arthur Gallop...has filed suit in superior court against the state board of equalization charging that the state is violating the constitution by collecting sales tax. Gallop forced the court hearing by refusing to pay his sales tax last month.

You will notice that in the above examples the first sentence alerts the listener to the rest of the story. The details of the event (the true lead) do not appear until the second paragraph. The story would make sense without the first sentence; its only function is to serve as an attention grabber.

Writing an effective lead is probably the most important aspect of the writer's job. If you lose a listener because of a poor lead, it is possible that we will have lost him for the rest of the newscast.

It is essential that the lead "hook" the listener. This can only be done by making your leads as interesting, vital, and local as possible, the last requirement, as we have been stressing over and over again, is the most important. There is hardly a story that can not be re-written to emphasize the local angle and to tell the audience why they should care about knowing the details of an event.

There is one caution that should be exercised when writing your leads (and your stories, for that matter). You must be careful about inserting editorial judgements disguised as interpretations. You should avoid such phrases as, "There's good news tonight. from the capitol..." What may be good news for one part of your audience may be, and probably is, bad news for some other section.

One of the advantages broadcast journalism has over newspapers is its ability to tie stories together. Radio-television writers create this cohesive whole by using "coupling pins" or "trances" as they are commonly called in newsroom slang.

A "trans" is simply a word or phrase that carries the audience smoothly from one news item to the next. It may be written at the end of one story or at the beginning of the next. It may have been pencilled in during the final editing process after the story order has been decided by the editor.

Coupling pins are "throw-away" material. They can be left out of the newscast without being missed. But if they are used skillfully, they can add to the understanding of the news by giving the listener the impression that the entire newscast has been integrated with thought and planning.

Effective transition statements give a perspective, a time reference, a point of departure against which to view the "total fabric" of the day's events.

There is some disagreement among broadcast journalists ever using "trances." Some feel they are an artificial device, while others use them constantly without logical consistency or concern for the flow of the copy.

Actually, such coupling pins are quite normal in everyday conversation. It is common practice to sprinkle our speech with phrases that link one thought to the next or words that alert our listener about what is coming next. To do this, we use such phrases as by the way, meanwhile, as you recall, at the same time, however, while that was going on, etc.

Obviously, many of the phrases we use in conversational language cannot be used in broadcast writing, but there is one bit of advice you can borrow from the "street language." Don't use transitional phrases where they don't logically fit. If you have to strain to put in a trans, don't.

When you are writing coupling pins, look for some common element that links the various items together. It may be geographical, time sequence, activity, historical references anything to indicate to the listener that there is a thread that draws the stories together.

UNDERTAKING SCRIPT WRITING FOR TV DOCUMENTARY AND COMMENTARY

Now we shall discuss "Scripting for TV Documentary and Commentary." The TV script begins with research on the given topic, followed by 'treatment' of the subject similar to the slant of any newspaper article. The script eventually takes final shape after several drafts and improvements. This process of elimination and inclusion involves the separate areas of visualizing the story and writing the voiceover or commentary to match the video. The script is the genesis of the ultimate programme. We shall study more about the inputs that go into the preparation on TV scripts in this chapter.

The Television Script

A TV script differs from a radio script is that it has a visual component in addition to the audio content. Evidently, the video is prominent out although undoubtedly the narration, dialogue, music and sound effects contribute to the overall effect of the programme. Yet the audio and video content require careful blending to make a compact whole right from the script stage. The two should match each other and never be antagonistic. The audio, *i.e.*, the sound content of the TV programme, ought to contribute to the video, *i.e.*, the visual content of the TV programme, by adding a distinct flavour of its own.

The final programme has to be visualized fully on paper first. Only then can the later stages of 'production' and 'post production' of a programme be planned and carried out successfully.

No matter how through the initial research, generally conducted among books and other print material, the exploratory conversations conducted by telephone or even face to face, there is no substitute for visiting the various locations and sites to see and experience the subject at first hand. One needs to obtain some kind of 'feel' for the place, its sounds, smell and general atmosphere. This cannot be done by proxy and the writer should not try to dodge or delegate. The actuality of places changes all kinds of previously held ideas and misconceptions which mere. reading around the subject may have inspired.

How much time is taken and the degree of thoroughness with which on the spot survey is carried out will vary. If the writer has had to travel overseas and is lodged in an expensive hotel his employer will not want him to overextend his stay. However, the justification of detailed recces is financial and organizational as well as artistic. It needs pointing out eloquently to accountants and administrators that one man roaming around with a notebook exploring a location-costs far less in money and man-hours, than an entire production crew shooting in all directions, or eating its head off in frustrated and expensive idleness because the location has not been adequately 'recce-ed' in advance.

The prime purpose of the recce is to enable the writer to clothe the skeleton of the outline with the flesh of practical scenes which can be recorded in picture and sound. The phases through which the writer passes on his way from recce to script are similar to the ones which lead from original research to outline. In the initial research, the information gathering stage was followed by a short fallow period to allow the memory to forget the dross and retain only the significant. Then came the imaginative leap to formulating the outline.

Similarly, the recce starts with absorbing impressions and noting scenes and characters and their pithy sayings. At this stage all should remain tentative and no firm commitments to possible participants should be made. After the information had been gathered and the notebook and head of the writer are both bursting with facts and notions, when he has talked to everyone and seen everything remotely relevant, he should retire, back to base. There he should again give himself a day or two to forget the chaff. When his memory has winnowed away the inessentials he will be in a position to make the second imaginative leap to shaping and ordering his material into the most telling and effective script. He should not refer to his notes until the broad sweep of the script has been committed to paper. Then, and only then, should he check the accuracy of his recollection. Nor should he worry over much if he experiences a few false dawns before he hits on the final shape. He should console himself with the scriptwriters' friendly platitude; 'Paper is cheap-cheaper than either video-tape or film.' The time to experiment, to discard and start again, is on paper. It is prohibitively expensive to suffer a change of heart or mind midway during production. In the shaping of his script, the writer has the template of the outline to guide him.

On the basis of the research material, it will be recalled, the tripartite structure of the outline had been formulated. Beginning statement of theme; Middle—development of the theme with its conflicts and contradictions; End—climax resolution and recapitulation.

However, difficult as it was to shape the outline, it will probably be more complex to fit all the additional information acquired as a result of the recce into a coherent shape. Even though the writer may be almost overwhelmed by the sheer coherent shape. Even though the writer may be almost overwhelmed by the sheer quantity of the material, adherence to the outline is vital if the structure and clarity of the programme is to be preserved.

One may have to be strong minded and exclude all manner of interesting sidelights revealed by the recce cannot be contained within the chosen central theme and its development. No single programme can deal exhaustively with any subject and it is better to confine oneself to one main aspect rather than attempt to ride off in all directions. If one is making an informational programme, it is best to limit oneself within the theme to not more than three new pieces of information as it is unlikely that the viewer can absorb more at one sitting.

The main theme, its statement development and final resolution should run like a backbone through the programme. Just as in the animal kingdom no vertebrate boasts of more than one backbone, so no programme can cope with more than one main theme.

The TV Script vs the Newspaper

Scripting a topic for a TV programme differs significantly from writing a piece about the same subject for the newspapers. In the former the words are not too literary, rather they are colloquial and revolve around the terms used in every day speech. The audio content of the script has to facilitate easy registration on the viewers even as they absorb all the visual information. The audio must neither be long winding nor detract from the overall effect of the video. It must be clear in one go. On television, it is not possible to recheck and go back to the information once again. However, this is now partially possible with the Teletext information on 'pages'. Each of these pages remains on the screen for a given duration, to enable the viewers to read the information on screen. In any other TV programme, returning to the words once they are uttered is not possible. Whereas, in a newspaper, the reader can go back and forth at will and 'recall' the information when required.

The TV Script vs the Radio Script

Again, the TV script differs from the radio script in more ways than one. The most obvious difference is the addition of visual input into the TV medium. The visuals contribute to the TV programme substantially. In such instances, the accompanying commentary can be kept to the minimum. The audio medium of radio meanwhile rests entirely on the audio content, be it spoken word, music, sound effects, location sound, etc. Moments of absolute silence in the programme are few and far between. The commentator on radio has to work extra hard to portray the atmosphere of the event in all its actuality. Indeed, the visual component of the TV medium offers tough competition to radio. The description of the same event in words in place of video is truly a task for the radio commentator. Of course, both radio and television aim to transport their audiences to a ringside view of the event. The 'view' may be conveyed by means of words or pictures, depending on the medium.

Developing a TV Script

The methodical process of developing a script is time consuming. Nevertheless, it pays dividends to follow a stepwise procedure: the first step is conceptualization or concept formation; then the writing of the treatment of this proposal; the skeletal structure of the treatment is fleshed out into drafts of scripts; the script is then finalised for shooting.

Concept

Once the research on the topic is carried out, either the TV programme producer writes out a proposal and enlists the services of a scriptwriters to 'flesh out' the structure of the script, or may engage a scriptwriter from the outset to conceptualize the programme, pen the treatment to be given to the topic, and follow it up with a detailed script.

The term conceptualization refers to the threading together of a concept or theme through the programme. It is similar to the leaving of a tale as the narration proceeds.

Treatment and Master Scene

The treatment is an outline of the content and style of a proposed programme. It is the basis for writing the script.

Extensive research has to be carried out initially on every aspect of the proposed programme. For instance, the location, costumes and content. Research conducted in these and other related aspects enhance the quality of the programme. If the programme is a documentary its content will have to be factual. If it is a docu-drama, fictional content too is permitted. Then, based on the extent to which the presentation is fictional or factual, the programme is categorised as drama-documentary or documentary-drama. Further categorization of this documentary medium is possible by referring it to its subject, say 'social', 'sports', 'personality portrait', 'environmental', 'legal', etc.

Several factors influence the final script. Prominent among these are the budget limitations, the specific discussions about the idea and, the ease of implementing the decisions taken at the discussion stage.

The treatment is an outline of likely camera shots, important scenes and situations. It is a point of reference when the script is being developed and finalised.

The Master Scene Treatment is a broad description of the visuals and action together with the probable dialogues and narration. It is the intermediate stage between the Treatment and the shooting script.

We give here one example of the Master Scene Treatment.

The Bharats, a young suburban couple, are at table in their sunny breakfast room. Mr. Bharat, a young, thrusting executive is reading The Times. Mrs. Bharat is buttering a piece of toast.

Mrs. Bharat: Anything interesting in the paper?

Mr. Bharat: (Distractedly) Mmm?

Mrs. Bharat: Will you take your nose out of that paper and talk to me. . .etc, etc.?

The master scene treatment is the last stage at which the story can in any sense be read as a literary work. It resembles the text of a play, except that it carries rather more exact descriptions of the scenery and explicit stage directions. If non-TV people like sponsors, vetting governments and financiers have to approve the project, it is easier for them to comprehend the master-scene treatment than the more detailed shooting script. Ultimately however, these main or master scenes have to be broken down into their component shots, either by the writer, or if that is the arrangement, by the director.

Drat Scripts

The TV script consists of two distinct components the break of the visuals, *i.e.*, the video is written on the left hand side of the page and the corresponding audio is mentioned on the left hand side of the page and the corresponding audio is mentioned on the right hand sample script side. Many additions and deletions are made before the script takes final shape. These constitute the draft scripts.

Shooting Script or Camera Script

The shooting script is a detailed, shotwise script to guide the shooting of the film. A shot is the basic division of a film into elements within which continuity of time and space is preserved. The camera are specified, as are the various scenes and sequences.

A succession of related picture or scenes compromise a sequence. A sequence may be defined as a section of film which is more or less complete in itself. A scenes means a continuous shot of a complete series of actions.

There are different types of shots based on the content, size of subject and angle from which the subject is shown. A shot that shows one person or thing is called a singleton. A two shot is a shot showing two people.

A *Close-Up* (CU) is a shot where the main subject occupies most or all of the picture frame.

A *Medium Shot* or Mid Shot (MS) shows the picture at normal viewing distance, and cuts actors usually at the waistline.

A *Long Shot* (LS) *is* a shot that shows the object of principal interests from a distance. Thus, an MS is a shot midway between LS and CU.

A *High Angle* shot of a subject taken from above.

A *Low Angle* shot is a shot of a subject taken from below.

Every shot has a specific impact by its very composition. The script seeks to enhance this impact by juxtaposing the shots in a meaningful manner. Such a stringing together of shots makes for easy narration too. A long angle shot of a person makes the person appear small and weak.

An over the shoulder shot (OS) is a shot taken with the 'camera positioned behind one of the subjects. The resulting shot is a view of the scene as seen from a position behind the shoulder.

We shall now elaborate the same master scene treatment that we had given earlier, into a shooting script.

Shooting Script:

Day 1.

1. Breakfast room. Sunshine coming through window, Mrs. Bharat. Anything interesting in the paper?
   Two-Shot Mr. and Mrs. Bharat seated at Breakfast table.
2. MCS Mr. Bharat buried behind Times.
   Mr. Bharat (DISTRACTEDLY) Mmmmm?
3. CU Mrs. BHARAT at table, buttering toast.
   Mrs. Bharat (PETULANTLY)
   Will you take your nose out of that paper... and talk to me.
4. Two-shot favouring Mr. Bharat still behind his paper, his wife glaring at him.

Dividing the page into a left-hand picture side and right-hand side allows the elaboration of another convention, namely that what appears on the same horizontal line of the page, happens at the same moment in time. In the above treatment as Mrs. Bharat comes to the words.

"...That paper", the picture changes.

For ease of reference in production and editing it is useful to number each shot, to label it INT = Interior, or EXT = Exterior and to indicate whether it is intended to depict daytime, (Day) or nighttime (NIGHT).

The camera movement, if any, has to be specified in the script for the camera person's reference. A Pan is a movement of the camera with respect to its vertical axis. Horizontal pan right refers to the movement of the camera from its static position to its right. Pan left is the movement of the camera from its static position toward the left. Tilt is movement of the camera in the vertical plane. Tilt up or tilt down are the instructions to move the camera up or down in the vertical plane, respectively.

The Need for Multiplicity of Camera Positions

Does one really need so many shots just to show a man sawing a plank in half? Who needs all these different camera angles? The answer has to be the viewer.

Changing the shot because writer, director or camera person were bored or wanted to demonstrate their skill cannot be sufficient reason. The only acceptable motivation for varying the shot is because at the precise moment the *viewers wanted and needed additional visual information.*

During the opening long shot, just as the viewers are wondering about he identity of the person in the back garden, the scene cuts to show a medium shot of the man approaching a plank. Just as the viewers wonder what the man is doing, they see the medium close shot of the man beginning to saw. What is he sawing? The close-up of shot 4 clearly shows the plank. Is sawing difficult? The viewers wonder. In answer, the close-up of the man's face in shot 5 shows his look of concentration. At the same time it serves as a cutaway.

Each new shot appears precisely at the moment when the viewers subconsciously demand the next piece of information. If the timing of the subsequent editing is right, the viewers will not even be aware of the separate shots. Scriptwriter, director and editor, all will be trying to give the viewers the shot they want as and when they want it.

Editing Script

The editing script is written on the basis of the footage one has obtained after shooting for the programme. The transitions from one shot to the next are mentioned in the editing script alongwith the duration of every shot. The cassette number containing the shot and the counter reading of the cassette at that particular shot·is also mentioned.

The transition from one shot to the next may be a Cut, Dissolve, Wipe.

Dissolve is a mode of transition wherein there is a progressive superimposition of one picture on another until the second picture replaces the first.

A *Wipe* is a method of changing scene in which one picture seems to slide across the screen, wiping out another.

The commentary and video should merge as one whole. The visuals may be self-explanatory or require commentary to accompany them. The commentary must fir the video with great precision. It is for this reason that the commentary must be well scripted. Of course, the quality of the commentary can make or mar the video. The words used to depict ideas and thoughts and perceptions must be apt, clear and contain a natural flow of their own.

The commentator's voice, diction, inflection, tone, speed, accent, stress on the right syllables, pauses at the correct junctures, all assume importance. When the face, gesture and other non-verbal expressions are not in view, the voice, its quality and manner of expression take on an added significance. The commentator must also match the visuals on the screen and explain the content of the action being shown. The timing of the commentary should be precise and coincide with the pictures. This is especially the case in a pre-recorded programme. In a running commentary for a direct telecast of an outdoor event, firstly the event is news worthy and as a consequence, its video coverage is extremely important. Secondly, a lot of preparation goes into 'scripting' the commentary. Research and collection of interesting aspects about the event and its precedents ought to be carried out and all information double checked, as this would be a basis to deliver the commentary. It is best to leave the running commentary unscripted, while at the same time referring to the information you have accumulated for the purpose of your 'script'. In other words, you write down the information that you collect in the course of your research and memorize most of it, keeping your papers at hand for ready reference. Even so, as you speak your commentary, so sure must you be of the information and its context that you need not read the notes you have made, but instead reel off the points coherently and with ease. Your viewers will then be able to comprehend what you say.

It is an art to recognize the patches when commentary is not necessary. If the picture says it all there is no need to add to it. The purpose of a commentary is to identify and make clear the content and context of the images on the screen. The commentary has to complement the visual information, fulfill the curiosity of the viewer about any item in the picture frame and may also include anecdotes and interesting piece of information.

The commentator must constantly remind himself that talking down to the viewer is best avoided. It is no singular virtue to be speaking into the microphone to an audience. On the other hand, it would definitely pay dividends to be adopting a stance of sharing ones knowledge and perceptions with the viewers.

4

Applying the Space Technology in Satellite TV and Airing Satellite News: National and Global Scenario

UNDERSTANDING USE OF SPACE TECHNOLOGY

The application of space technology to communications heralded the most sensational achievement of the 1960s. The period witnessed the coalescing of military oriented research and advances in miniaturisation, computers and satellite launchers. Thus the prophecy of Arthur C. Clarke of utilising satellites for communication turned into reality. This new technology heralded in a new phase of the information revolution by making instant communication a fact of life for millions of people. Since the launching of the first artificial satellite (SPUTNIK) in 1957, the satellite technology has made tremendous progress and its uses span a wide variety of applications. Apart from providing global television coverage of international events, the earthorbiting satellites today provide for long distance telephone and tele-communications service, weather monitoring, resource surveys, automated data collection and transmission, navigation surveillance, aeronautical mobile services, peace-keeping and signal intelligence. In vast countries having widely dispersed or scattered territorial islands or settlements, communication satellites are inevitable means of providing reliable, economical and flexible communications and tele-communications services even of specialised nature. For instance, they permit the distribution of a single transmission to multiple reception points and elirfiinate transmission costs. Other benefits of the satellite technology to communications are that it can eliminate a major part of the hierarchical switching system required by landline transmission systems.

The communication satellites providing these services manifest a variety of orbits. Of these, geo-stationary is the most commonly used orbit for public and specialised commercial telecommunications and TV services. Other orbits range from high inclination to highly elliptic and polar ones depending on the particular mission requirements of service, coverage, survivability, etc. The geo-stationary type of satellite warrant orbit and speed that can keep the satellite directly over one point on earth.

Dawn of Satellite Age in India

The potentials of space communications for India were recognised in the early sixties itself. To exploit that potentiality the government set up a nodel agency in 1962, the India National Committee for Space Research under the administrative umbrella of the Department of Atomic Energy (DAE), it became in 1972 a separate full fledged department of the Government, the Department of Space.

The basic objective of the development of indigenous expertise and capacity in the field of satellite communications was to use the technology for practical applications and national needs in a cost effective manner and betterment of the lives of people. The priorities envisaged in this respect were the use of space for communications, education, weather monitoring and forecasting, natural resources management. The main thrust of this effort was to achieve self-reliance. This means doing the system planning ourselves and proceeding to realise hardware by Indian effort as much as would be practicable in terms of technical quality, cost and schedule. In the first stage the Experimental Satellite Communication Earth Station (ESCES) was set up at Ahemdabad in 1967. This was intended to provide training and first hand experience in satellite communications to engineers from India and other developing countries. And that actually paid a rich dividend in helping the country to set up India's first International Satellite Tele-communications Earth Station (INSTELSAT Earth Station) at Arvi in 1971 and in raising another station at Dehradun in 1976.

Among the earlier landmarks was the mooting of the potentially of satellite television as a medium of mass communication and education in India during the mid '60s by the late Dr. Vikram A.

Sarabhai, the founder of the Indian Space Programme. Subsequent studies and deliberations by National Satellite Communication (NASCOM) Study Group paved the way for the government to accept in 1969, the proposal of the DAE (Department of Atomic Energy) for conducting Satellite Instructional Television Experiment (SITE) with NASA's ATS-F (ATS-6) Satellite. The decision to undertake this momentous experiment before embarking on operational systems was taken primarily to gain experience in development, management and testing of a satellite based instructional TV system suited primarily for rural areas. Further it would determine relevant system parameters. Another important objective of the proposal was to enhance indigenous capability in the design, development manufacture and operation of direct reception sets in villages and earth stations to enable India to undertake the requisite ground segment of operational domestic satellite system indigenously.

The experiment (SITE) in direct satellite TV broadcasting commenced from August 1975. For one year it beamed instructional programmes daily for four hours in four languages to selected chartered areas covering 2400 villages in Andhra Pradesh, Bihar, Karnataka, Madhya Pradesh, Orissa and Rajasthan. Apart from these areas, about 400 villages in Gujarat also received these programmes through a transmitter set up by the India Space Research Organisation at Pij. The experiment ended on 31 July 1976, establishing confidentially that the SITE was a technical success in managing and maintaining the ground segment. As regards the software aspect, there were controversial and varied assessments about the social implications of the programme by the SAG and Planning Commission studies.

Nevertheless, in view of the overall success of the experiment, the government decided to provide a terrestrial TV service especially to the villages in the areas previously covered by SITE. Consequently a plan was launched to install a chain of transmitters at Gulbarga, Hyderbad, Jaipur, Muzaffarpur, Raipur and Sambalpur. In addition, a low power transmitter installed at Pij by ISRO, was taken over by Doordarshan as part of SITE-continuity programme to serve the Kheda area of Gujarat. All these transmitters, commissioned in 1977-78 now cover a total of 9560 villages in Gujarat including 1014 villages covered earlier by the SITE programme.

Indian Satellites

In view of the remote possibility of covering the deep rural and inaccessible areas by terrestrial TV, the government took another bold decision in 1975 to provide direct satellite coverage through the Indian National Satellite (INSAT) system to people in such areas. The object is to enhance quantitatively the telecommunications, meteorological and mass communication capabilities of the country, all in one package. In this series Indian has launched nine satellites, six from abroad and three from India itself. The launching of the latest was a three-in-one satellite known as INSAT-1B. Spun out of the Challenger, an American space shuttle on 30 August 1983, it marks an important milestone in India's journey in the space age. Our country now becomes the 9th member in the family of satellite nations. This satellite, is different from other single purpose satellites of the world and has a life span of 3 years. It is designed to relay up to 8000 telephone calls simultaneously across India, beam television directly to 1,00,000 rural antennas as also telecast weather pictures to them. INSAT has two distinct features direct telecast and national networking using existing terrestrial television transmitters. Specific clusters in six States-Andhra Pradesh, Bihar, Gujarat, Maharashtra, Orissa and Uttar Pradesh—have been selected on the basis of backwardness of areas, availability of suitable infrastructure and utilisation of existing television facilities. Under this scheme, 2000 direct relay set and 2000 very high frequency sets (in addition to the existing areas) will be installed in speedy identified villages for community viewing in the aforementioned States.

The satellite programme which has been criticised as a misplaced attempt to enhance national prestige, is producing practical benefits. The INSAT system is now providing communications to isolated areas such as Leh in Jammu and Kashmir, Port Blair in Andaman and Nicobar and Lakshadweep islands. It has also for the first time provided an instrument to scan resources of the earth and help farmers in their operations by forewarning the weather. Detailed weather forecasts in turn can mean a dramatic increase in the size of harvests. It is also hoped that the services of the satellites would help national integration, understanding and friendliness, apart from education in the wider sense of the term. However, care has to be taken that this medium of long-range interaction should not become a medium of centralisation or indoctrination. In a country like India the need for multiple links and dispersal of production equipment is obvious.

Indian on the Space Map

These experiments in India's own satellite system, though modest in nature and beset with teething troubles, have assuredly put India on the space map. India is reckoned the fourteenth nation to send man into space. Her satellite and space technology may not have advanced as much as in other developed countries, but these innovatory ventures have provided a mature and meaningful experience in the field to its space scientists and communication planners. It is claimed by our space scientists that India's capability in satellite design, fabrication and operation is reasonable by world standards. In the area of launching vehicles, however, the country is still a little behind in terms of the mass of payload that can be put into orbit. The struggle is on to achieve in the next few years significantly enhanced operational communications and mass communication systems. An important element in the realisation of these goals is the indigenous capability to build and launch our satellites. How seen? The Space Commission Chairman assured at the time of commemoration of the satellite to the service of the nation on 11 February 1984 that before the expiry of the seven year life of the INSAT-1 satellites they would be replaced by the INSAT-2 satellites followed by the operational spacecraft.

SATELLITE TELEVISION AND DEVELOPMENT IN INDIA

The role of satellite television in the national development of India is analysed from four meta-analytical viewpoints. The *Utopian* view believes that technology is intrinsically good for mankind. The *dystopian* view believes that technology is an unmitigated curse. The *neutral* view believes that technology per se has no important effect on society. The *contingency* viewpoint recognises the potentially desirable and undesirable impacts that accompany a technology, and proposes that the societal impacts of the technology are differentially determined by the context prevalent in a society at a particular time. The attitudes of various scholars and officials regarding the impact of satellite communication technology in India's development are reviewed, and this evidence mainly supports the contingency approach. Finally, we discuss the Kheda experimental communication project in rural India that demonstrates the viability and practicality of the contingency approach.

The objective of the chapter is to analyse the role of satellite television in the national development of India from four meta-analytical viewpoints. The role of technology is society has long been an important intellectual issue for social scientists. Historically scholars have adopted one of three meta-analytical viewpoints of technology (Gendron, 1977). The Utopians, believe that technology "is an unalloyed blessing for a mankind" (Mesthene, 1981). They see technology as the solution providing shortcuts to the solution of many social problems. Weinbert (1981) refers to these shortcuts as "technological fixes." In addition, technology provides solutions to problems caused by technology itself. The Utopian viewpoint espouses rapid technological development and is skewed towards technological determinism. Polices should promote development and the application of technology. Failure by a technology to impact society is seen as the fault of the business and political communities, who according to the Utopians, are unfortunately in control of contemporary society. The Utopian viewpoint has been championed by such scholars as Fuller and Weinberg (1981).

Second are the dystopians, who are convinced "that technology is an unmitigated curse" (Mesthene, 1981). Like the Utopians, they view technology as very influential in society. However, they see technology as a problem generator rather than as a problem-solver. They argue for constraint in technological development, and reject the notion of the "technological fixes." Policy, according to them, should protect the privacy and solitude of the individual from the technological onslaught. Failures of a social programme are attributed by dystopians to technocrats who they fear are gaining control of society. They believe that technocrats should be excluded from all policy formulation. Ellul and McDermott (1981) are fervent proponents of the dystopian approach.

Third, the neutral school argues that technology does not have an important effect on society, technology, per se, is not a problem-solver nor a problem-generator. In the words of David Sarnoff, "Technology is neither good nor bad... it depends on how we use it." The neutral school of thought disregards attempts to assess, forecast, or control technology. Unlike the utopian or dystopian points of view, the neutral school is skewed towards social determinism. The impacts of a technology are shaped entirely by social, economic and political institutions. Policy, according to them, should not be oriented toward technology. The concept of a failure is irrelevant to the neutral viewpoint, from since society (not technology) determines the impacts of technology on society.

Mesthene (1981) claims that three viewpoints (utopian, dystopian and neutral) are by themselves "unhelpful" to policy-makers. Based on studies conducted by Mesthene and his colleagues during the mid-1960s, at Harvard University's Programme on Science and Technology, Mesthene proposed the "dual effects" hypothesis. Technology has "both positive and negative effects, *and it usually has the two at the same time and in virtue of each other*" (Mesthene, 1981). The role of the social analyst, therefore, is to analyse the contingencies that determine the positive and negative effects of a technology, society can then attempt social, technological and political reform in order to optimise the positive effects while minimising the negative effects. The contingency approach therefore sees technology as a problem-solver and a problem-generator. It sees technology as malleable. It selectively adopts and designs technological innovations, and assesses the social and technological constraints on their use. Policy is the collective responsibility of social, political and technological institutions. Examples of studies that have used the contingency approach include Pool's (1977) dual effects analysis on the social impacts of the telephone and Kling's (1980) Social anlysis of computing. Table 4.1 summarises the major characteristics of the four viewpoints of technology, just discussed.

In this chapter, we propose a contingency approach, to identify the potentially desirable and undesirable impacts of satellite communication technology in the development of rural India. We chronicle the views of scholars investigating these impacts; we summarise the lessons learned from past experience, and describe current developments and debates surrounding the role of satellite television in India. Based on our analysis we present a series of contingencies which mediate the impacts of satellite television on rural development. Next, we describe the recently concluded Kheda experiment in India that adopted the contingency approach. We conclude with a discussion of how arguments from the Utopian, dystopian, neutral, and contingency viewpoints were manifested in the social analysis of satellite television for rural development.

Historical Perspective on Satellites

In the mid-1960s, a noted Indian scientist. Dr. Vikram Sarabhai, began arguing that a nationwide television system could play a major role in promoting economic and social development. At Sarabhai's initiative, a national satellite communication group (NASCOM) was established in India in 1968 (Table 4.2). Based on its studies and recommendations, the Government of India in 1969 approved a proposal for the Satellite Instructional Television Experiment (SITE) using the National Aeronautics and Space Administration's (NASA's) Application Technology Satellite-6 (ATS-6).

SITE was a one year pilot project in 1975-76 primarily undertaken to experiment with television through satellite communication to reach rural areas in India with specially designed programming. SITE's objectives were to improve rural primary school education, to provide teacher training, to improve agricultural, health and hygiene, and nutrition practices, and to contribute to family planning and to national integration (Agrawal, 1981). Indian technicians were provided an opportunity to gain expertise with operational problems concerning satellite hardware, costs, and management on a small scale prior to launching their own national satellite (Mody, 1979). After SITE's year of television broadcasting to 2,400 Indian villages, the ATS-6 satellite was returned to the United States.

Table 4.1: For Perspectives on Technology and Society

Perspectives	*Characteristics of the Perspectives*
1. *Utopian View*—technology drives social progress.	Technology as problem-solver. Faith in the technological fix. Support for rapid technological development. Skewed toward technological determinism. Policy should promote development and application. Proponents: Buckminster Fuller, Daniel Bell. Technology as problem-generator.
2. *Dystopian View*—technology	Oppose the technological fix. Constraint technological development. Skewed toward technological determinism.

(*Contd.*)

	Perspectives	*Characteristics of the Perspectives*
	generates and intensifies more problem than it ameliorates.	Policy should protect privacy, solitude, and individualism. Proponents: Jacques Ellul, Hohn McDermott. Technology not a major problem solver nor a problem generator.
3.	*Natural View*—impacts are negligible, both positive and negative and people adapt.	Technology is neutral, depends on how used. Technology assessment unnecessary. Skewed toward social determinism. Policy should not be oriented toward technology. Proponent: David Sarnoff.
4.	*Contingent View*—impacts depend on who controls specific technologies in particular social settings.	Technology as problem-solver and generator. Technology is malleable. Selectively adopt and design technological innovations. Attempt to assess both social and technological. Constraints on use and impacts. Policy should promote social, political and technological reforms. Proponents: Ithiel de Sola Pool/Robert Kling.

Table 4.2: Main Events in Development of Satellite Television

	Year	*Event*
1.	1968	National Satellite Communication Group (NASCOM) is formed by the Indian Government, headed by Dr. Vikram Sarabhai, Director of the Indian Space Research Organisation (ISRO).
2.	1969	ISRO signs an agreement with the United States 'NASA' (National Aeronautics and Space Administration) to launch the Satellite Instructional Television Experiment (SITE) in India.
3.	1975-76	SITE broadcasts television programmes to 2,400 Indian villages from NASA's Application Technology Satellite-6 (ATS-6) for one year.
4.	1982	Indian National Satellite-1A (INSAT-1A) is launched by NASA, and broadcasts radio and television programmes for five months, until it is deactivated due to technical problems.

(Contd.)

	Year	*Event*
5.	1983	INSAT-1B is launched by the U.S. Space Shuttle, and begins television broadcasting in India.
6.	1985	60 million people watch television, while 396 million (53 per cent of the total population) live in areas covered by television broadcasts. Advertising sales earn US $52 million for Doordarshan (the government television network) in 1985, up from US $8.5 million in 1980.
7.	1990	About 90 per cent of the Indian population will have access to television broadcasting, thanks to satellite transmission of television programming to low-power television re-transmitters.

The first Indian national satellite, INSAT-1A, was launched in April, 1982, by NASA. This communication satellite provided radio and television broadcasting for five and a half hours each day until it was deactivated in August, 1982 due to technical problems. A second Indian satellite, INSAT-1B, was built by Ford Aerospace and launched on eighth flight of the U.S. space shuttle, on October 15,1983.

Still in operation INSAT-1B has led to a major expansion of television broadcasting in India. Prior to 1983, television access in India was limited to 28 per cent of the nation's population living mainly in the four urban centres of Calcutta, Delhi, Bombay, and Madras. With the direct reception of television signals from INSAT-1B, about 53 per cent of the population gained access. By 1990, about 90 per cent of the Indian population will have access to television broadcasts. This increase in access is due to the large scale installation of television transmitters in India during the past few years. Many of these television stations are low-powered, covering an area with a radius of 15 to 25 miles. During 1984 and 1985 alone, the number of television viewers almost doubted 60 million people. Today, television sets are being sold in India at the rate four television sets every minute.

Satellite television in India is seen as both a problem-solver and problem-generator; it has dual effects. Its chief proponent, the national Government of India, contends that satellite television can combat illiteracy, narrow the gap between the rich and the poor, and enhance national integration (Agrawal, 1985). Detractors fear that satellite television will widen the gap between the urban elites and the rural poor, will be used to promote the government in power, and will eventually lead to a degeneration of traditional Indian values through television advertising, which promotes commercialisation and consumerism.

We look at the dual effects of television in its quest (1) to provide educational information, (2) to narrow the gap between the rich and poor, and (3) to promote national integration. We also document the *contingencies* that affect the pro-development role that television could play in filling these three goals.

Role of Television in Education and Information

Vikram Sarabhai felt that satellite television could play a major role in ushering rural India into the information age. The role of satellite television was envisioned as two fold: (1) to provide curriculum-based education to help ameliorate India's high rate of illiteracy and (2) to provide useful information to both literates and neo-literates so as to prevent them from slipping back into functional illiteracy.

Curricular-Based Education

The role of satellite television in replacing the school teachers was rejected in India. Instead, satellite television was considered an effective teaching-aid for in school teachers.

SITE was India's (and probably the word's) first attempt to utilise satellite television to educate rural illiterates. The experiment was only a partial success, and a series of evaluations of SITE helped identify three serious impediments to success (Aggrawal, 1981):

1. A lack of teacher training.
2. Inappropriate use of the telecast language.
3. Centralised production of television programme materials for culturally diverse audiences.

Information Programmes

In addition to curricular-based educational programmes, satellite television also can inform viewers about current developments in agriculture, family planning health and nutrition. Information provided by these television programmes may require viewers to contact extension agencies, banks, or hospitals to obtain further information, products, services, or other resources. Television viewers do not always have access to these institutions or the appropriate agency was not prepared to provide follow up information or other resources. SITE indicated that (Eapen, 1979):

1. The training of extension workers was inadequate.
2. Portable video and communication support materials were not used widely enough.
3. There was a lack of communication and coordination between development agencies and the television broadcasters.

SITE showed that the following contingencies mediate the success of satellite-based educational television:

1. The planning of software requires more time than planning for hardware (Mody, 1979).
2. Policy-makers, programme planning designers, producers, and social scientists should work in teams.
3. Defining target audiences, conducting needs assessments, preparing programme specifications trying out programmes before their transmission, and collecting feedback data from transmissions are necessary (Mody, 1979).
4. Television messages should be concretised by boundary spanning organisations like agricultural extension agencies, banks, hospitals, community organisations, and local governments (Agrawal, 1981; Jesudason, 1977).
5. Agricultural innovations that were cost effective and locally usable were more likely adopted, while other agricultural innovations were not.

Current Developments

Drawing upon the experience gained from SITE, INSAT-1B routinely transmits educational programmes which are received by over 10,000 community viewing television sets provided by the national government. INSAT-1B beams educational programmes for primary school children for 90 minutes each school day. The content of these programmes range from science, to entertainment, to national awareness, to health and nutrition, and to biographies of great men. After each telecast, in school teachers explain to their students the details of the television programmes they have just viewed. INSAT-1B also offers in service training for school teachers in a multi-media approach using print media, interpersonal discussions and experimentation in pedagogical methods. So the present satellite television broadcasting takes into account the importance of teacher training, although the majority of telecasts ignore regional languages and cultural norms.

In addition, each weekday afternoon, 'INSAT-1B broadcasts television programmes for university students that are produced in the communication study centres of five Indian cities—Delhi, Pune, Ahmedabad, Roorkee, and Hyderabad. The goal is to emulate the Open University System of England, but many of the Indian University programmes merely duplicate classroom lectures and are said to have an "unimaginative" content (Vedantam, 1986).

Finally, INSAT-1B also transmits information programmes especially for the rural viewer, for one hour each day. These programmes focus on agriculture, family planning, health and nutrition. To aid television's role in development, television messages about agricultural innovations are supplemented by multi-media training programmes for extension workers and farmers.

Policy Debate

Satellite television has bad some degree of success in educating the Indian masses. The major policy debate in India about satellite television is three fold:

1. Is satellite television economically more viable, than conventional methods of teaching? The role of satellite television as an aid for curricular-based education faces enormous challenges. There are more than 400 million illiterates in India. Three-quarters of all children never go to school at all, or drop out before they are 12 years old. Of the half million schools in India, two-thirds have no school buildings. In addition, one-third are either one-teacher schools or completely unstaffed.. Only a small percentage of villages in India have central station electricity. Given such fundamental inadequacies; satellite television, critics argue, is a luxury that rural India cannot afford.
2. Critics concede that satellite television programmes have succeeded in informing viewers. But can the rural viewer put the information to proper use? Viewers watching television programmes are often frustrated since they

cannot follow through on the information that they obtain from television. For instance, about 70 per cent of the water sources in India are polluted, a major source of ill health in India. Many village women daily have to walk several miles to fetch water. How can satellite-broadcast television programming, critics ask, help solve India's drinking water problem?

3. Critics argue that even though satellite television has improved the overall level of literacy in India, the technology has increased the gap between the "haves" and "haves-nots." For instance, Indian farmers may find the satellite television programmes about agriculture to be informative. But only those who can afford fertilisers and who own land can actually gain from the televised information. As a result, the gap between the land owners and the landless labourers (who form 90 per cent of the village population in India) is widened by television broadcasting.

The debate surrounding the criticism of television in India is not likely to be resolved in the near future. As the world enters the information Age, the information "haves" and "have-nots" are likely to become the economic "haves" and "have-nots" (Porat, 1978). In the following section, we show that a direct relationship exists between satellite television and the gap between the rich and the poor.

Television as a Gap-reducer Between Rich and Poor

India's Seventh Five Year Development Plan states that television will act as a "vehicle of education and extension," especially in remote and backward areas so as to narrow the gap between the urban rich and the rural poor (Hussain, 1986: 1). The SITE experience demonstrated that community television viewing was an important factor in breaking down caste barriers between untouchables and high caste Hindus (Agrawal, 1978). However SITE also made clear that effective television programming required a very high financial investment. The Government of India had already made a large financial commitment to the development of satellite television. But only an extremely small fraction of the budget was earmarked for software development. SITE demonstrated unequivocally the need for emphasising such software components in the television programmes.

To supplement financial support from the government, Doordarshan (India's television authority) turned to commercial sponsorship. In the three years that the INSAT-1B satellite has been broadcasting, Doordarshan's commercial revenues from advertising sales increased from about 200 million Rupees (US $ 16.5 million) in 1983, to 625 million Rupees (US $ 52 million) in 1985, an increase of 300 per cent.

Policy Debate on Commercial Television

The commercial success of Indian television comes at a price. Television, critics argue, has not succeeded in reducing the gap between the rich and the poor in India because of the urban bias of Indian television. Of the 6 million TV sets in the country, more than threp-quarters are in the four metropolitan cities of Delhi, Calcutta, Madras, and Bombay. Television programming decisions are influenced by the elite middle class, who want more entertainment and have less need for educational programmes than do their rural and urban-poor counterparts. Catering to urban/elite tastes interferes with the government's commitment to using television to reduce gap between the "haves?" and "have-nots" (Reddi, 1985).

Indian television's educational potential is overshadowed by entertainment programmes. Bombay's well-established film industry has made inroads into commercial television production. Doordarshan is in an unenviable predicament, caught between the opposing forces of commercial film domination on one side and the television system's stated educational objectives on the other side (Joshi, 1983).

Doordarshan's Working Group on Software insists that television in India should not encourage conspicuous consumption. However critics argue that television commercials propagate a consumerist mentality and serve the ends of the rich more than the poor. If commercialisation is not checked, critics contend that television will become a means of exploiting the poor by the rich (Chawla, 1986).

The debate between the two roles of satellite television (to inform versus to entertain) has resulted in one fruitful outcome: Social content soap operas. These soap operas inform the public about important social problems within traditional entertainment formats. These commercially sponsored, and indigenously produced television soap operas caused a programming revolution at Doordarshan (Rogers and Singhal, 1986), Social content soap operas in India were begun in 1984 with "*Hum Log*" ("We People"), which touched upon such social and moral issues as family planning, amelioration of women's status, illiteracy, the evils of dowry, drinking alcohol, and drug abuse. Programmes like "*Hum Log*" are attempts by the Indian Government to provide pro-development entertainment to the public, by utilising television to purvey desired social values.

Role of Television in National Integration

In addition to the pragmatic goals of reducing illiteracy and poverty in India, Sarabhai had also described satellite television as a tool for "continued stability and national integration" (Sarabhai, 1969). A utopian goal for television is to help create a sense of political oneness among India's disparate linguistic groups (Mody, 1979). Coverage of events like the Republic Day parade, the Independence Day celebration, and major national festivals, along with programmes of classical music and dance from different regions, know your India travelogues, and biographies of great Indian teachers are attempts at fostering national integration.

The SITE experience helped identify certain problems that must be addressed before satellite television could be used as an effective tool for national integration:

1. News broadcasts are mostly national (thus excluding regional and local coverage) because Indian news organisations are ill-equipped to provide on location regional and local news coverage.
2. Satellite television programmes are broadcast only in Hindi and English. English is understood by only 3 per cent of the nation's population; Hindi by about 40 per cent. In a nation of many languages, television broadcasting in just two languages alienates a large section of the population.
3. A large section of the populace views television as a propaganda apparatus for the ruling political party. As a result, the source-credibility of television is severely eroded.

Based on these observations, members of the Indian Parliament and of the national press have often demanded that the government hand broadcasting over to an autonomous body (Akash Bharati, 1978). Thus far, the government has resisted such demands defending its monopoly as necessary to ensure balance between educational and entertainment programmes (Kagal, 1983). Certain critics of satellite television in India are convinced that satellite television is not likely to succeed in fostering national integration.

On the other hand, certain critics believe that satellite television is successful in integrating the hation. They recognise the inherently centralising nature of the technology. Further, they contend that the success of satellite television should not be gauged by the extent of integration, but rather by the values that are being used to integrate the nation. Critics fear that the centralised control of television is homogenising regional cultures in India. As a result, the local regional languages and customs not shown on national television may ultimately fade away.

Further, Indian television mainly screens Hindi films that portray a Westernised and urbanised lifestyle; thus Indian cultural traditions may be threatened. Critics contend that the films broadcast on television create viewers' needs, which cannot be fulfilled. The televised films, soap operas, and advertisements introduced village viewers to a world of different social values.

Will television unify India at the cost of its cultural diversity? Bhatia and Karnik (1985) feel the solution to the dilemma is the decentralisation of television, both politically and culturally. Most development problems can be dealt with most effectively at the regional or local level, they say, and Indian television should reflect such localisation.

Contingency Approach

Our previous sections discussed satellite television's role (1) in providing educational information, (2) in reducing the gap between the rich and the poor, and (3) in promoting national integration. Contingencies affecting television's role in development were discussed based on (*i*) the SITE experience and (*ii*) the limited experience to date with INSAT-1B. In previous sections, we discussed certain lessons learned from India's experience with satellite television. Table 4.3 summarises these lessons and presents them in the form of contingency factors. These contingencies are considered *vis-a-vis* the main aim of studying the effective use of the satellite television in India.

An additional contingency time has been grossly underplayed in past research. Most social researchers have conducted evaluations of satellite television by gathering data immediately before, during, or immediately after the implementation of satellite television. The majority of the evaluation research efforts were cross-sectional in design, using data gathered at one point in time, or at best consisting of a single pre-test followed by a single post-test. Such a research strategy informs us about immediate effects following the introduction of satellite television. However, empirical evaluations of SITE and INSAT-1B, so far, have left many processual questions unanswered:

1. Were the impacts of satellite television only temporary, vanishing shortly thereafter?
2. Did the impacts of satellite television continue to increase over time?
3. Was there a long gestation period before the impacts began to appear?
4. What were the consequences of withdrawing satellite television from village audiences, as was the case at the end of the 1975-76 SITE project?

Longitudinal research designs are required to address such process questions. Answers to these questions will undoubtedly provide additional contingencies that must be considered (Monge, and others, 1984).

Table 4.3: Contingency Factors Affecting Role of Satellite Television in India's Development

I. Organisation	
1. Autonomy.	(*i*) from the government, and (*ii*) from commercial interests.
2. Decentralisation of administrative, research, and production units.	
3. A participative form of management, and a reward system for programme planners, producers, and researchers.	
4. Training of communication researchers, production personnel, custodians, and teachers.	
II. Communication Hardware	
1. Building, operating, and maintaining equipment and facilities for television broadcasting and reception.	
2. Using "little media" (VCR's folk media, posters, and puppetry) along with "big media."	

(Contd.)

3. Television in conjunction will print, radio, and film media, complemented by interpersonal communication.

III. Infrastructural Development

1. Operating schools of communication in universities.
2. Development of, and liaison between boundary-spanning units in organisations such as banks, hospitals, extension agencies, community organisations, and local-self governments (*panchayats*).
3. Integrated development in the transportation, power, irrigation, telecommunications, health, and educational sectors.

IV. Audience Research

1. Research methodology.
   - (*i*) in-depth formative and summative evaluation using both qualitative and quantitative methods, and
   - (*ii*) needs ascertainment and message analysis.

V. Programme Software

1. Advanced software planning regarding broadcasts:
   - (*i*) the language of the TV,
   - (*ii*) source-credibility,
   - (*iii*) programme-scheduling,
   - (*iv*) geographical and economical access.
2. Content of programming development:
   - (*i*) audience participation in programme,
   - (*ii*) format of programming, and
   - (*iii*) message design.

VI. Time

1. The manner in which the effects of satellite television occur over time.

The Kheda Communications Project: The Contingency Approach

A promising experiment in decentralised television broadcasting was the Kheda Communications Projects. As mentioned earlier, SITE was conducted as a pilot project of satellite television during 1975-76 by India's Space Application Centre (SAC), which in turn is part of the Indian Space Research Organisation (ISRO). The lessons learned from the year-long SITE project spurred SAC to experiment with a hybrid decentralised broadcasting system. The site chosen for the experiment was Kheda district, which neighbour SAC headquarters in Ahmedabad, India. The Kheda Communications Project (KCP) was the outcome of considerable planning and of attempts to learn lessons from the successes and failures of SITE. Intellectually, the Kheda Project rejected the Utopian, Dystopian, and Neutral views of satellite television's role in rural development. Instead, the Kheda Project identified many of the contingencies that determined the efficacy of using satellite television in India.

Here we discuss the contingencies with which the Kheda Project dealt and how it did so. Organisationally, the Kheda Project was a decentralised unit. It relied heavily on government funds for financial support, thus making it independent of commercial interests. The Kheda Project enjoyed a great deal of political autonomy from the central government. The organisation fostered a participative form of management, recognising the fact that individuals working at various levels in the organisation were often the most qualified to suggest improvements. The Kheda Project encouraged a high level of lateral communication between production, research, and administrative staff. Organisational members were encouraged to attend training workshops in their respective skills (many of which were organised by SAC). These initiatives demonstrated that the Kheda Project had taken into account organisational factors (Contingency 1, in Table 4.3).

The Kheda Project hard ware represented a hybrid configuration. A low-power transmitter was located at Pij village about 50 kilometers (30 miles) south of Ahmedabad. The Pij transmitter was connected to the local Doordarshan station, as well as to a satellite earth station at SAC. Thus the Kheda Project could broadcast (1) local television programmes (originating either in their own studios, or the local Doordarshan station), and (2) national (satellite) television programmes received from the SAC earth station (Bannerjee, 1981). The Pij transmitter covered a radius of about 35 kilometers (21 miles), most of Kheda district (Agrawal, 1981). A large proportion of the Kheda transmission equipment was obtained from the International Telecommunications Union (ITU). The television receivers were manufactured in India. Some 650 community TV sets were provided to 400 villages, and installed in public places (frequently schools) toured these villages to service and repair the television receivers. Each day 90 minutes of local programmes and 100 minutes of national programmes were broadcast (Bhatia and Karnik, 1985). Half of the local programmes were produced by the Kheda studio at SAC, and half by Doordarshan. So the planners at SAC had attended to Contingency II.

Kheda district comprises some 1,000 villages with 3 million inhabitants. Kheda is a major center for milk production. Following a mass rally of farmers in 1946, the private dairy marketing firms were transformed into the Kheda District Co-operative Milk Producers Union (AMUL). The co-operative philosophy has been embedded in the district for the past forty years. "It is often stated, and sometimes believed, that landless labourers have been most benefited by AMUL, and indeed, participation in dairying is typically widespread" (Celb, 1984). The resulting spirit of participation among the villagers at Kheda was complemented by financial and institutional support from state and local governments and milk co-operatives. The Kheda Project collaborated with extension agencies working in dairying, agriculture, and health services, and with local banks, co-operatives and employment exchanges. So the Kheda Project had to its advantage the presence of an infrastructure (Contingency III) that was desirable yet not easily replicable in other villages throughout India.

The Kheda Project also relied heavily on audience research (Contingency IV). The SITE Continuity Research Center (SCRC) helped identify three areas of specific social interest to the Kheda viewers:

1. Bondage and oppression by feudal landlords.
2. Ritual and superstition that were used to reinforce the class structure.
3. Failure of government machinery in implementing national and state programmes.

The broad software goal (Contingency V) set by planners of the Kheda Project was to promote rural development and social change at the local level. Audience participation was aggressively encouraged at all levels. Villagers were involved as actors, writers, and visualisers in the production of television programmes dealing with such social problems as exploitation, caste discrimination, minimum wages, alcoholism, co-operatives, and local and national elections. For example agricultural experts were televised in farmers' fields; they returned to the same fields a few weeks later to discuss with the farmers their difficulties in implementing the previous recommendations. A variety of formats including puppet shows were used to deal with taboo issues. A campaign approach was followed, synchronising intensive television programming with local efforts by field agencies. Health programmes focused on preventive measures including, immunisation of children and anti-malaria measures. Family planning programmes aimed at both motivation and information. The attempt was not merely to convey *what* to do, but also *why*. In addition, the Kheda Project relayed many national television programmes via satellite. In order to ensure their fullest impact, the Kheda Project often provided regional language commentaries or introductions. These programme capsules provided a context for rural viewers not familiar with either the language of the telecast or the significance of the event.

The Kheda experiment ended on July 25, 1985. After ten years of serving the villagers of Kheda district, the transmitter was shut down despite vehement protests *from* the local population. The transmitter was then shifted to Madras to facilitate a second television channel for that city.

The Kheda Project was a success in decentralised broadcasting. The experiment gained universal recognition when the Kheda Project received the prestigious UNESCO prise (of US $ 20,000) for rural communication effectiveness. Kheda demonstrated that television can be used for development in India. The Kheda Project was successful because it took into account the contingencies of organisation, communication hardware, infrastructure audience research, and programme software. It fell short on the contingency of *time* (Contingency VI). The Kheda Project was shut down when its long term developmental effects were becoming evident, but were only beginning to be empirically demonstrated. The Kheda Project is no more, ironically, just at the time that India needs more Khedas.

Bhatia and Karnik (1985) claim that the Kheda Project "attempted to not only work at the frontier of the permissible but, through planned brinkmanship, attempted to extend the limits of the permissible." The Kheda Project represented a historic intellectual advancement. Although conducted under the auspices of the Space Applications Center, it rejected the primacy of satellite television as the single panacea for rural development. The Kheda Project rejected previously held simplistic Utopian, Dystopian, and Neutral views of the role of satellite television in development in favour of a contingency view.

Discussion

We began this chapter by describing four meta-analytical viewpoints that have been adopted in studying the impacts of technology on society. In this section we review the case of a specific technology—satellite television in India and classify the arguments about the role of satellite television of India, on the basis of their meta-analytical assumptions.

The utopians believe that implementation of satellite communication will solve the problems of illiteracy, social and economic inequity over population, and regionalism. "To put it as dramatically as possibly, "Arthur C. Clarke (1981) observed," unless major investments are made in space millions are going to die, or eke out brief and miserable lives. And most of these millions will be in the Third World." The Utopians profess faith in the technological fix. Problems not solved immediately by satellite communication will be solved by future refinements in satellite technology, such as more powerful satellites, more channels, and more reliable and portable power sources. They support rapid technological development and stress importance of "leapfrogging" obsolescent technologies (Sarabhai, 1968). Policy formulation emphasises the development and application of satellite technologies, although it does not include questioning the selection of satellite technology. Failure is attributed to the fact that technocrats are not in control of society. "The administrative structure of governments in many nations is dominated at the top not by technocrats but by professional administrators, lawyers or soldiers, who are hardly likely to provide the insights, experience and the first hand knowledge of science and technology" (Sarabhai, 1968).

The dystopians acknowledge that satellite television is influential, but they contend that it accelerates the creation of a "class media" rather than a mass media (Atal, 1985). It results in regional resentment rather than national integration (Kagal, 1983). Problems caused by technology (such as water pollution) can not be solved by satellite technology. They advocate constraint in the development of satellite television and argue for traditional education rather than the "electronic classroom." Policy, in their opinion, is best kept out of the hands of technocrats, who should be confined to the area of their specific skills.

The proponents of the neutral view downplay the effects of the technology per se.

In a contradiction of the McLuhan adage, Habibullah, an Indian media expert, said "We have to remember that the medium is not the message." (Kagal, 1983). Instead, the content of the message must be emphasised. As a result, the impacts of satellite television in India are, in their view, determined exclusively by what society does with this technology. The formulation of policy, according to them, should be in the hands of the software developers. Interestingly, the current commercialisation of Indian television lends support to their hypothesis that, rather than the technology, it is the social and economic institutions that determine how satellite television will be used in India.

The emergence of a contingent view of satellite television in India has been relatively recent. The Kheda Project, embodied the spirit of the contingency approach. It began in 1975, and the first public statements supporting the contingency view point appeared in the early 1980s. The Asia Pacific Regional Seminar of Utilisation of Satellite Television for Mass Communication organised by the India Institute of Mass Communication, with the assistance of UNESCO, was a landmark in the history of satellite television in India. The outcome of the seminar was a series of principal recommendations which recognised the dual impacts of satellite television. Specifically, it proposed that (AMCB), 1984):

1. Software should *lead* and not follow hardware.
2. Widespread provision for interactive community viewing should be provided.
3. The projection of foreign lifestyles and entertainment not only serve no useful purpose but can be socially disorienting.

4. Training for television programme producers is most important.
5. A video recording and playing mode should be used along with television transmission for local interest, development-promoting programmes.
6. Television should be used for programming of national, regional and local interests, utilising satellite, microwave, single station, and video modes.
7. Feedback is of utmost importance for relevant television programme making in developing countries.

While recognition of these contingencies represents an important intellectual breakthrough for policy-makers, the implementation of policies based on these contingencies will ultimately determine the contribution of satellite television to Indian society.

Noshir S. Contractor, Arvind Singhal and Everett M. Rogers

AIRING SATELLITE NEWS

The most important technical development in television news has been the introduction of electronic transmission of new pictures a revolution that was foreseeable in the late 1950s, but did not come to full fruition until the 1970s. Foreign news film coverage in particular is now no longer dependent on despatch riders and train or airline schedules; instead, communications satellites, strategically placed over the oceans, relay moving pictures almost instantaneously from one side of the world to the other to be recorded on video-tape for use in the same day's news programmes. This process of electronic news transmission had begun in earnest in the 1960s, with the Eurovision news exchanges among the broadcasting stations of western Europe, using land line and microwave links, and with similar hook-ups across the American continent. These were given a considerable boost by the Vietnam war, coverage of which was speeded from west to east to east coast, after air freighting across the Pacific.

The first communications satellite over the Atlantic, Telstar, was used for news transmissions from 1962, when an ITN news programme was broadcast live from New York instead of from the usual London studio. It was a gimmick that made the front page lead in the following morning's papers, but within days the process of transmitting bit news stories by satellite had become, if not routine, at least unremarkable. In those early days, the satellite were in low orbits round the earth, so that they rose and set, and were available as relay stations only for about half an hour at a time while they were "visible" from both sides of the Atlantic. Later satellites were put in orbits 22,300 miles up, their orbital speed coinciding with the rotation of the earth, so they remained fixed over one spot, and were available permanently. There are now four such satellites-two over the Atlantic one over the Indian Ocean, and one over the Pacific. Each satellite can cover about 40 per cent of the earth's surface, so the link-up is now global.

To anyone without television experience a script can seem a bare and unimpressive piece of prose. We are so used to the literary conventions of the printed page that we forget how artificial they are. A writer for print has only the black ink patterns on the page to communicate his thought. Words must be chosen with precision and ordered with care to overcome the lack of vocal emphasis and visual expression. In television, words carry only a part of the sense; the rest is supplied by tone of voice, facial expression music an illustration a film or even a pause. A television writer must imagine all this envisage the whole scene or his words will be absurdly stilted and literacy. He must learn to see the programme in terms of action and reaction, of dramatic development, rather than as words on a page. He must learn to listen with his inner ear to how the script will sound when spoke.

> From the Palace Guardhouse, rose-pink against the snow, a fur-capped company in sale grey greatcoats swings off easily past frozen quays. Bright basic played on curiously elongated French horns takes them up towards the kiosked, tree-lined espanade. They steam as they march. Each man carries a rifle whose butt is of polished walnut, like a piece of elegant furniture. Ducks pause to watch them from the apron of ice, fur-clad shoppers from the bright-windows pavements.

This is an excellent piece of descriptive prose for the printed page, but for a television programme or film it would be useless. It is composed almost entirely of visual images cunningly evoked by words. On television the word images would either draw attention to the absence of pictures or if suitable pictures had been filmed would describe only what the viewers could see for himself. This would be the major fault in the writing from a television point of view: there are others. Try to say easily and naturally, fur-capped company in pale gray greatcoats. "Say the word "kiosked" to the next person you meet, and ask him what it means. It will probably be baffled. It is a word one can write, but not say. It is possible that a passage like the one above might inspire a director or cameraman to shoot a fine film sequence, but the words themselves would never be transmitted. They are literally and television is not literary medium.

Writing for television needs to be easy and colloquial in style, for although the audience may total millions it consists at any one place of a few people in a room, and one must not address them as though they were a public meeting. The script must never seem to be written or read, but must come from the speaker in the kind of sentences that might be spoken in a room without absurdity. Of course one cannot afford the looseness of real conversational speech the words must be organised with care and economy, but they must sound easy and spontaneous. They must also be written in a style that comes naturally to the person who is to speak them, particularly if he is to be in vision when they are spoken.

The writer should imagine the programmer as it will be, he should run through the titles and the opening music, picture to himself the first scene, and listen with his inward ear to the words as he writes them. Fine phrases and impressive preambles are usually a mistake: simplicity and directness rarely are:

> "*Good evening*. This Is Your Life...this is the Boat Show. But we're interested in one boat and one man..."

In 20 words the programme and the location are identified, and our curiosity is aroused. On paper, the words are sparse, even unclear, but spoken with the right emphasis over a long shot of the exhibition with the camera zooming in on the boat in question, they made perfect sense. Words in television are only part of the total communication, and are sometimes not needed at all. Not the least of a good script writer's virtues is knowing when to say nothing.

Scripting the Documentary

A writer's approach to a television script differs according to the type of programme. For a film documentary, he begins with a mass of detailed research material complied by himself or a researches. From this and the outline treatment already agreed with the produced he must shape a story in words and images that engages and holds the audience's attention.

Although people profess to like "good, documentaries," it is a fact that they want them only as an extra. Few people would actually take money out of their pockets to go and see one at a cinema if it were the only film showing Television audiences, too, are prepared to accept documentaries only if they crop up in an evening's viewing and happen to capture their interest. If they become at all board, they are likely to switch to more entertaining fare. For the documentary writer and producer, this is the greatest peril and challenge. A television documentary must capture its audience in the first minute, and fight for its attention for the next half hour.

The golden rule is begin with action and with people, then make the audience curious about what happens next. If the documentary is about an airport, do not begin with a long shot of a plane landing; begin with a pilot as he starts his approach. Put the audience in the cockpit with him, in the control tower following the radar screens, in the cabin with the passengers. Let them listen to the talk down and watch the runway rushing up to meet them. Only when the plane touches down need you to a long shot of it on the runway, and bring in a line of commentary: "That happens 200 times a day at X Airport."

The action need not be wildly dramatic or on a large scale: a small boy peering through a hedge, a girl running down a flight of stairs might be good beginnings, provided the viewer is given something or someone to identify with, and is given an incentive to go on watching. Once his interest is aroused, he will tolerate a slackening of pace and tension while the scene is set for the story. Then everything depends on narrative the stage by stage unfolding of a story, building to a climax and a conclusion. New facts, new insighs, new scenes must constantly be found and presented, each one adding to the last, and advancing the story. If there is a commercial break, the first half of the film must build to a "cliff-hanger" ending that will sustain an audience's interest and curiosity until the second half. It is often a temptation. He should remember that the viewer is being bombarded with information through eyes and ears, and there is a limit to the amount he can take in without mental indigestion and consequent withdrawal of interest.

Layout of Television Script

The usual and most convenient way to lay out a script is to divide the page in half vertically, setting out the story line on the right, and a brief description of the pictures on the left. Inevitably, both are modified as shooting progress, and the film itself absorbs much of the written script.

Fashionable Kingston Street.	Only a few hundred yards from the elegant homes of London's middle class in the royal Borough of Chelsea and Kingston lie some of the worst slums in Britain.
Small boy runs down street.	Interior-various shots of slum house-one sink on landing-family of live in one room.
Interior—various shots of slum house—one sink on landing—family of five in one room.	The Smith family of Blank Street-five of them-live in one room. Their only source of water a tap on the landing, their only source of heat a paraffin stove. When it rains, the water comes in, when it blows, the wind howls through the cracks in the window.

In the final version of the film, most if not all of these words might well be unnecessary. The director might begin with an interior shot of a rich household, and looking out. Below, in the street, a poor child walks past with a loaf of bread under his arm, past the "FOR SALE 130,000" sign outside one house, round the corner to the dilapidated building where he lives. The camera follows him up the uncarpeted stairs, past the dripping tap on the landing to the crowded square of the one room, where a baby is tugging at washing hanging round a paraffin stove. The point of the script is made without words. But without the words in the fist place, the sequence might never have been shot.

Many of the facts set down in the script may eventually be covered in interviews during the film, or in voice-over narration edited from tape recordings of people appearing in the film. Sometimes, the narration may be done entirely in this way, with the script consisting of various voices edited together to form a continuous story line. Inevitably, the writer's work becomes submerged and absorbed in that of the procedure, the director, the cameraman and the film editor. So much so that documentary writers often move into producing or directing their own films or procedures and directors write them in the first place.

The writer's final job on a film documentary is to write the commentary. This is a curious technical skill that needs a good deal of experience before it can be done well. The trick is to the film itself tell as much as possible, using commentary covers more than half of a documentary film, there is something seriously wrong with either the film or the writing. Timing is of the essence. Words and pictures must work together, often to the split second, for the best effect. This imposes a stern discipline on sentence construction. Dominating everything is the footage or timing of each scene and sequence. There words take up one second, two words one 35 mm foot, five words one 16 mm foot more or less. It is useless to try to cram in more words than there is time for, or to anticipate with the commentary what the film will reveal in its own good time. Film has its own pace and logic, sometimes faster than words, sometimes slower, and the commentary must follow it. Cutting film to match words is possible, but it never works for long. The picture is naturally dominant.

The commentary writer works with a shot list prepared from the final cut of the film. This sets down a brief description of each shot with a note of its length in feet or seconds, according to taste or studio custom. The following example is listed in 16 mm feet:

Scene	*Cumulative footage*	*Individual footage*
LS Cairo and River Nile	5	5
LS Crowded bridge, pan to LS of boat sailing down river	11	6
Aerial shot of cultivation round river with desert round	15	4
LS river bank from boat	19	4
LS ruined temple	19	4
LS ruined temple	22	3
Tilt up pillars to low-angle shot of them against sky	27	5
Another angle, ditto	29	2
MS bas relief on wall of hunting scene	32	3
CJ details of bas relief	36	4
LS barren hill tilt down to group of tourists entering tomb	41	5
LS interior of tomb as tourists enter	44	3
LS coffin of King Tut	48	4
CJ face on coffin	53	5
LS coffin, tilt up to wall painting	59	6

This is obviously a travelogue type of film with no strong action to carry the story line. The commentary will have to work hard to give significance to the shots, which are only mildly illustrative of the theme the economic development of Egypt. The following commentary is fairly pedestrian, but is at last calculated to make the most of words and pictures together. The figures on the left mark the footage at which the commentator will start to speak either cueing himself or being cued with the aid of the footage counter in the dubbing theatre.

1½ Four hundred and fifty years before Christ, a Greek historian described Egypt as "the gift of the Nile."/Today, a ration of thirty million people still depends on the river for its existence.

10 It brings a narrow ribbon/of life to what would otherwise be total desolation./

1[6] Five thousand years ago, this long fertile valley gave birth to one of the world's/most advanced civilisations. Here, the earth yielded enough for man to stop struggling for mere/existence, and start reaching for the stars.

3[2] To the Ancient Egyptians, life seemed so rich and good that they tried to carry it with them beyond the/grave. Here in "the Valley of the Kings, in 1922, the English archaeologist Howard Carrier discovered" a tomb which had remained untouched for three/thousand three hundred years the tomb of the young King Tut-ankh-Amun.

4[6] His mummified body lay inside four coffins of cedar of/ Lebanon, entirely covered with gold. "In the whole history of excavation"—wrote Carter "nothing so wondrous had been seen as was now revealed by an/electric torch."

A great deal more thought and calculation has gone into this simple bit of commentary than might appear at first sight. Note that it does not begin until the audience has been given time to take in the first picture then, in the first sentence, it identifies the city and the river while at the same time emphasising the historical theme which will be developed later.

The reference to 30 million people falls on the shot of crowded bridge. The words "narrow ribbon" slightly precede the aerial shot showing the narrow ribbon so that the audience is prepared to see the picture that way when it is presented. The metaphor about reaching for the stars coincides with the camera tilt upwards. Pauses are left between the paragraphs to give the viewer time to take in words and picture, and make the connection between the two. Every sentence relates in some way to the picture on the screen at that time without wasting time and words in describing what the viewers can see for himself.

The only way to write a commentary closely to film is to count words and calculate footages precisely. Often, a sentence or a paragraphs will have to be rewritten several times before it "hits" the picture in the right way. Extra words may be necessary to pad out a sentence so that the key word coincides with a certain image or action; at other times, the wordage may have to be cut to the bone for the same reason. Sentences may have to be inverted and turned inside out.

If a film shows a long shot of a crowd of demonstrators, then a close shot of a particular personality waving a banner, it is no use following the normal subject verb object sentence construction: "Professor John Snudge, Head of the English Department, was among the demonstrators." This will only irritate the viewer by causing him to look for Snudge when there is no Snudge yet to be seen. When Snudge does finally appear, the viewer will be uncertain whether that is, in fact, he. Far better to turn the sentence round, and write: "Among the demonstrators was the Head of the English Department/Professor John Snudge." This sentence would be "back-timed", from the shot of Snudge so that the first part of it coincide with the long shot of the demonstrators, and the mention of Snudge's name with the close shot. Not only does this identify the man positively, it also alerts the viewer, in advance, to what he is about to see. Phrases like "as you can see" or "this is" or "in the picture now" are never necessary in film commentary. If words and picture coincide, the viewer will make the connection. Equally, if they don't he will be baffled and less than a second's error can make all the difference.

This automatic link between what is said and seen is rich in opportunities as well as pitfalls for the writer. Words and pictures together can counterpoint each other, offering metaphors, irony and allusions that neither would have separately. In a documentary series about the World War II, there was an episode about the protracted struggle against the U-boats in the Atlantic. It ended with a long shot out to sea with a Snudge of smoke on the horizon. The commentary line was "But victory was still hull down on the horizon." In a film about prospecting for oil and gas in the North Sea, the commentary referred to the roulette table odds against a major discovery, and spoke of oil companies placing their million-pound bets, over shots of men gathered round chequer-boarded charts and aerial views of drilling rigs in the sea. Used with skill, words and pictures can multiply each other's impact, but one needs to be wary of being too facile. Once the words attract attention to themselves instead of to the picture and the story, the game is being overplayed. The picture must be dominant.

Writing Newsfilm Commentary

Writing commentary to Newsfilm is governed by the same principles, but plagued with special problems. Newsfilm is not shot to a script, and often covers only a part of the story that must be told. It is shot in a hurry, edited in a rush, leaving the writer little time to polish his sentences. Nevertheless, he must turn in a workmanlike job, and with practice this is usually possible. Normally, he sees the rushes when they are screened, and gives his opinion about which shots will be needed to put his story across. Often, he goes into the cutting room with the film editor, and works out the sequences with him, particularly if there are passages of sound film a speech or an interview to, cut that require a newsman's editorial judgement.

Although the film may tell or illustrate only a part of the story, the news writer's duty is to tell the whole, sometimes over shots which are not directly relevant to the facts he must put across. Film of a road accident rarely shows the actual collision. Film of an international conference may well show only representatives coming and going from the conference hall, while the writer must contrive to convey what the conference is about and what is thought to have transpired behind the closed doors.

As always, the trick is to relate the spoken word to the picture. The usual form is to write a paragraph of introduction to be delivered by the newscaster in vision. This follows the normal journalistic practice of presenting the main facts of the story in an arresting and lucid fashion. Then comes the film, and a different style has to be followed. The opening words of commentary must tell the viewer where and when the film was shot and must convey the rest of the news while keying it to the picture on the screen.

Note how the opening sentence of the film commentary points out the change of location, but does not waste words identifying downing Street. The name of the Industry Secretary is held back by the word order so that it coincides with his appearance. A similar technique conveys information about Mr. Gray, as well as identifying him, although he appears on screen for less than four seconds. Mr. Gray is mostly concealed in the crowd of reporters, but the writer uses his smile to identify him, and explains the interest shown by the reporters without referring to it directly. The sudden change of location to the airport is made clear at once, and again the naming of the MP is held back until he is clearly in view. Newsfilm of this kind is often called "moving wallpapers", but with a little care and skill it can be made meaningful.

Agencies the Main News Source

The information for the commentary is culled from the cameraman's dope sheet, news cuttings from the library and news agency copy. The news agency wire services are the basis of a television news programme. Twenty-four hour a day, the teleprinters of the Press Association, Reuters, Associated Press and others chatter out thousands of words, providing a blanket coverage of home and foreign news.

In America, the wire services send a special news summary to the hundred of broadcasting stations across the country who report national as well as local news. In Britain, where local stations give only local news, the two national services from London-ITN and BBC-take the same agency material as the Fleet Street newspapers, but they use it differently. Newspapers regard the agencies as background and filler material, relying for their main coverage on their own reporters, but television does not use its reporters in this way as news-gatherers and writers and agency copy is the staple material of news broadcasts.

It is rarely possible to use agency copy on the air in the form that it comes over the machines. An agency's main function is to pump 'out the news as fast as it can for the benefit of its main subscribers, with little regard to the special needs of television. Different reporters stories on the same subject are strung together with small concern for quality of writing, and sent to all subscribers for them to edit as they wish. For television, this usually means a total rewrite. Out of several hundreds of words, the television sub-editor must extract the essentials for a story only twenty or thirty seconds long.

Writing for Speech

The requirements are accuracy, clarity and brevity. The story must be completely understandable at first hearing. If the audience are muddled or mystified, you have lost their attention for the next few seconds at least, and that is enough to lose their interest altogether. The newspaper reader is eased into a story by the headline and the dateline. By the time he reads the text he already has a good idea of subject, place and personalities.

> The wave of "sightings" of unidentified flying objects sweeping the world since the Christmas photographs of "flying saucers" from New Zealand reached a fresh peak yesterday in actual "landing."
>
> A former nurse in South Africa claimed to have encountered a pink unidentified object. She said it landed near her home, and a squad of strange darkskinned little men got out.
>
> Mrs. Meagan Quezet, of Krugersdorp, west of Johannesburg, said the incident happened just after midnight, when she took her 12 year old son, Andre, for a walk because he could not sleep.
>
> "As we walked down the road we? could see a bright pink light over a rise, and suddenly we came across this thing standing in the road about 20 yards away. In front of it were these five or six beings.
>
> "These people were darkish skinned as far as I could tell. Once of the men had a beard, and seemed to be the leader. I said hello to one of them but I couldn't understand what he was saying. The creatures jumped about five feet into the air and vanished through a door into their craft. Then with a humming noise it disappeared into the sky."

Mrs. quezet and her son gave identical descriptions of the craft.

This kind of writing, adequate for the printed page, turns to a blur of confusing words when spoken. Stripped of headline and dateline, the story gives no clue about location until after the first sentence. The words sound awkward and unnatural on the tongue, and there is too much disparate information to take in at a first hearing. A television treatment of the same story might go like this:

> Another report of an unidentified flying object from South Africa and this time it's said to have landed.
>
> A former, nurse, taking her 12 year old son out for a walk just after midnight, says she saw a pink object in the road near home outside Johannesburg. A squad of dark-skinned little men got out, she said. When she spoke to one she did not understand his reply. The beings then jumped back into their craft, which took off and vanished.

The woman's son is reported to have given an identical description of the UFO.

The key phrases-printed here in italics are spaced out with "gray" connecting phrases which give the listener time to absorb the essentials facts.

Like most television news stories, this one condenses into 45 seconds what might easily occupy up to half a column in a newspaper. A whole half hour news programme can contain only about 4000 words; not as much as the front page of most newspapers and yet the main news must be covered. A newspaper can afford to print much that will not interest everyone. Each reader can select, accept or reject what is in the paper. If, after reading headline and intro, he finds that a story does not interest him, he can turn to something else with no break in the general activity of reading the paper. But in television he can not skip back and forth through the columns and the pages; he must take what is given as it comes. The television audience is much larger, too, than the circulation of any one newspaper, and includes readers of both the "popular" and "quality" Press. Both must be served and satisfied, their interest, awakened and held, Here, the enforced brevity of television news is a help. No story need go on long enough to become a bore to any large section of the audience, and if the stories are well enough written as a normal practice the viewer will come to know that his time will not be wasted by superfluous detail, and he will often follow a story on television that he would not bother to read in a newspaper. But the writing must be simple, lucid and easy on the ear. A story book once used by ITN, London, put it like this:

> A well written ITN programme sounds clear, intelligent, friendly and authoritative at once. Though space is limited, good writing is tremendously important. Don't be frightened to be dramatic in your writing, if the story merits it. But try to secure your drama by facts, not by adjectives. The fact Mrs. Kennedy cried out "No, no!" when Kennedy was shot is of more value than a dozen adjectives; But adjectives can be useful too, provided they are appropriate, and the kind you would use in spoken speech. Sentences should be kept short and simple, and must be completely comprehensible at first hearing. The viewer, until the reader, cannot pause to refer back or to digest a point. The simple pattern of subject, verb, object usually fits television speech best. Not every sentence needs to be complete, and the verb can be omitted surprisingly often.

In the BBC, news sub-editors are expected to dictate their stories to a typist to ensure that they think only in terms of the spoken word. Other news services do not run to such luxuries, but the principle is a valuable one. A writer can still mutter his sentences to himself before committing them to paper, and the more he does it from his own mind and not from the news agency copy and better the results is likely to be. Facts and figures can always be double checked afterwards. In tackling a complicated story, a useful techniques is to read the agency copy thoroughly until you have understood it perfectly, then put it to one side and decide how you would tell the story to your wife or drinking companion. Almost unconsciously, the mind recalls the salient facts first. In speech, one often uses an alerting phrase before telling a story, "Have you heard about house prices? They've gone up by 20 per cent."

Broadcast news follow the same pattern "A big increase in house prices. The Nationwide Building Society says the average price of houses in the southeast has gone up by 20 per cent in the past six months."

Often, this "headline" trick of speech can be used to tickle the audience's curiosity a little before giving the full story:

"A last minute entry for the big race tomorrow..."

"Good news for car-owners..."

Phrases of this kind are useful, too, in pointing a change of subject from the last story.

As well as learning to listen to his writing, the news writer must learn to visualise it. The total communication is what matters, and that includes picture. If a still or a map or a diagram can make things clearer, then use it, and write the story round it so that words and picture complement each other. Individual news casters have their own style of delivery, not only in vocal intonation, but in facial expression and gesture. One can hit this off by imagining the story as it will look and sound on the air. With experience, it can seem that one is not so much writing a piece as taking it down from dictation over one's mental television set.

For the dedicated writer who likes or has a compulsion to the lonely business of putting words on paper, television can be a frustrating medium. It scatters words on the air, and loses them forever. It transmutes lively writing into images and action, giving the glamour and the credit to performer and director. The writer seems to be regarded as a mere word technician. But the kind of mind that makes a good programme is a writer's mind, and television can not live without them. Perhaps it should value them more highly.

5

Understanding Film Making: Evaluating Roles of Cameraman, Editor and Producer

MAKING FILM : ROLE OF CAMERAMAN

Despite the development of other means of recording moving pictures, the film cameraman remains one of the chief tools of television journalism. "Electronic news gathering" cameras, small and light enough to be used in much the same way as the traditional newsfilm cameras are available. These have many great advantages, but they have not ousted photographic film. The film camera is light, portable, self-contained and robust, and it has about seventy years of development behind it. The film it shoots can be edited in an endless variety of ways, and there are large numbers of skilled people who know how to handle it. It looks as though the film camera and cameraman will be around for a long time yet.

Electronic Cameras

Where electronic cameras have unquestioned superiority is in daily news work. Their pictures can be played back immediately without processing; they can be transmitted back to base instantly via a microwave, or landline link, and can even be transmitted as they shoot, giving editors and possibly the home viewer the cameraman's eye view of the coverage as it happens. They cannot, however, take the place of a mobile OB unit, operating with several cameras and a control room, and able to produce a complete programme on location. Their is a single-camera operation, like film.

At the time of writing, the capital cost of ENG units is about three times that of a comparable film unit, and there are still limitations in the techniques of editing video-tape, compared with film. These factors will probably defer cost-conscious stations from using ENG indiscriminately or for documentary work, but for news ENG is the last logical link in the electronic chain.

Future developments may make it possible to transmit news pictures from a unit anywhere in the world to a satellite, and thence back to base by a process almost as simple as dialling an international call. This would cut out the delays and difficulties of transmitting pictures to a "gateway" studio, and perhaps liberate units from many of the restrictions imposed by some governments.

Function of the Cameraman

Whether electronic or photographic, the function of the cameraman remains to record the sequence of images which, cut together by the film editor, will tell or help to tell the story.

On a documentary or a magazine feature, the cameraman has a director to help him with this to analyse the script or story idea, and decide on the shots and sequences needed. Sometimes and especially on a news story he works alone, and must be his own director. Even when working with a director, however, a great deal must still depend on the cameraman. He is the only man who can follow what is in his viewfinder. Often, only he can decide on the spur of the moment to widen the shot, tighten it, pan with the action, or even switch off and ask for a retake. The director may plan a certain sequence organise the action, decide on the angle from which it shall be shot, but in the event it is the cameraman who must make it all work in terms of what gets on to the film that awkward little rectangle that is never quite the right shape an size to include what you want and exclude what you don't.

In the film studios, there is an elaborate organisation to ensure that everything in the frame is precisely right. The scene, the composition, the lighting, every movement and change of focus is predetermined. The director explains what he wants, the lighting cameraman uses his light to illuminate the action, create a mood, imitate nature, while the camera operator frames the shot and moves the camera with the action as required. The focus puller ensures that focus and aperture are calculated and continuously adjusted a small army is involved to ensure that everything is foreseen and dealt with.

Newsfilm and documentary crews are smaller, their equipment less elaborate and the action, lighting and environment utterly unpredictable, but they are expected to maintain a standard of quality that will bear comparison with studio work.

The cinema industry still uses 35 mm exclusively, but for television 16 mm is the standard gauge, particularly for news and current affairs. Great improvements were made in film emulsions in the 1970s, and the quality of 16 mm colour is now better than that of 35 mm in the 1960s. Coupled with improvements in lenses and in the systems of playback for transmission, this has meant that film can still hold its own with video-tape in terms of picture quality. It has the further advantages of portability, ease of handling and technical universality.

The lightness of 16 mm film and cameras was one of the factors that led to the hand held shooting techniques of television. Cameras can mingle with a crowd, shots inside a car and follow a procession without the need for tripods and dollies. True, the resulting picture is often unsteady by cinema standards, but on the small television screen this is not so noticeable as it would be at the local Odean. The home audience two or three people is prepared to accept an informal style of shooting and cutting that would seem out of place in the cinema.

Photography and Light

The first requirement of a news and documentary film cameraman is that he should be a good photographer. This often becomes obscured by the need for many other qualities, like initiative, persuasiveness, courage and endurance. But without this basic photographic ability all the other qualities are wasted.

Photography is drawing or painting with light: it is an art of great subtlety and technical complexity, but fortunately the basic principles are relatively simple.

The first consideration for a cameraman is always the light. It is light that makes the image on the film, captures the shape and texture of the objects in the scene, reflects the atmosphere, and sets the mood. There must be enough of it. Film particularly colour film is not yet as sensitive or acceptable as the human eye, and it is vain to imagine that what one can see can necessarily be photographed satisfactorily. A photograph is an illusion a pattern of light, shade and colour on a flat surface, that merely imitates three dimensional reality. Like all deliberate illusion, it needs the right conditions and skilled management to be convincing. A coin under a street lamp at night may look like money to you; to the camera it is merely an indistinct light coloured shape. You may be able to see the man in the shade of the old oak tree, but on film he will probably disappear into darkness. The snow that you feet in your fingers, hear crunching beneath your feet and see quit clearly clothing the landscape can be no more than a blank on film. Only light and the right use of it creates the illusion of your own visual experience.

The coin needs to be lit, not directly from above, but with a side light so that its thickness and inscription throw shadows and give an illusion of relief and perspective. The man in the shadow must be artificially lit, or so placed that he silhouettes against a light background, before the camera can see him. Snow must be shot against the light for its fluffy texture and sparkle to show up.

Using Sun and Sky Light

In daylight, the lighting situation is largely forced upon us. Sunlight cannot yet be commanded to appear or disappear, nor can we shift it to the most convenient quarter. We are forced to manoeuver camera and subject to exploit the given situation as best we can. For general work, the cameraman prefers to have the sun at a forty-five degree angle over his shoulder. The reason for this takes us to the heart of lighting technique.

A three-quarter light on, say, a human face gives a gradation from light to shade across that face. The forehead and check bone on the side closer to the sun are brightly lit. Below the cheek bone, there may be a slight brushing of shade. One side of the nose is lit; the other in shadow. Down the bridge of the nose, the shadow follows the shape of the nose. The eye of the viewer is presented with 101 clues about the shape and structure of the face that would not be available in a picture with "flat" behind the camera lighting. All these clues must be found and emphasised in photography, for the camera has only one eye, and therefore lacks our built in stereoscopic vision.

Film also makes shadows seem darker. Its range of response is less than that of the human eye, and the camera can be adjusted to only one level of light at a time. If it is set for the shadow, the sunlit parts of the scene are washed out. Often, in bright sunlight, the cameraman is forced to use extra, artificial light, or a reflector, merely to lighten the shadows and prevent details from disappearing into blackness.

In artificial light, the cameraman has more control. By placing his lamps and controlling their brightness he can in theory create any kind of picture he wants. This is an intricate and subtle art that earns its top practitioners large sums in the film studies of the world. The news film and documentary cameraman, however, generally has far less elaborate facilities. A normal kit of lights for a current affairs film unit would probably consist of about five or six kilowatts of lights-enough to illuminate a normal size living room or a group of about six or seven people.

The cameraman generally places on lamp probably a 1000 watt as the key light. This provides the apparent main source of light in the scene, usually from a position about forty-five degrees from the axis of the camera and the subject. Inevitably, this one lamp casts hard black shadows, which are lifted by placing a floodlight, of about half the intensity of the key light, flat on to the subject from behind or beside the camera. Often a back light is added to shine on to the subject from behind, and thus prevent him, her or it from blending too much into the background. Other small spot lamps may also be used to "kill" awkward shadows or bring out details. In addition, there will probably be separate lighting of the background of the shot. For the most part, the lamps are positioned fairly high so as to shine down on the subject at an angle of about forty five degrees. This looks normal to the eye, and avoids shadows in the background of the shot.

All this, of course, is barely scratching the surface of the subject of lighting. A skilled cameraman can so place and control his lamps that the ugly are rendered pleasing, the average lookers are made handsome and the handsome made monstrous if need be.

Choice of Film Stock

Depending on the light he is using and the subject he is shooting, the cameraman makes his choice of film stock. The main consideration here is its sensitivity to light. A highly sensitive film, which can record pictures in poor light is referred to as "fast"; a less sensitive film is referred to as "slow." Broadly speaking, the slow films give better quality. Fast films tend to have a coarse texture or crude colour and sometimes lack detail in the light areas of the picture. Manufacturers are continually improving the speed and quality of their films, and the general tendency is for all stocks to be become faster. None of them, however, is as sensitive or adaptable as the human retina or as an electronic television camera.

There can be so many factors governing the choice of a film stock light conditions, compatibility with film already shot, the kind of subject, the mood of the picture that it is impossible to make rules. Generally speaking, cameraman use the slowest stock they can in the circumstances.

There are several systems of measuring and expressing the photosensitivity of film, but the one most commonly used is the ASA scale. On this, a slow black and white film rates about 25, and a fast film 400 or 500. The middle range, most commonly used, runs from about 60-200. The scale is arithmetic, so that doubling the ASA exposure index halves the exposure required.

In black and white shooting, sensitively to light is practically the only consideration in choosing a film stock. Negative stock is nearly always used because it is common practice in news work to cut and transit black and while negative film, changing it to positive electronically by reversing the polarity of the television system. If prints are required, they are, of course, easily made at labs. Reversal black and white positives are, however, sometimes encountered. In these, the original negative image on the film is reversed chemically to positive during the developing process.

Black and white shooting has now become the exception rather than the rule as colour television has spread over the world, but it as well to be aware of some of the special problems it presents. Apart from depending more heavily than colour on light and shade, linear perspective and form, black and white needs close attention to contrast ratios if it is to transmit satisfactorily on television. The television screen is incapable of showing dead black or pure white: the best it can do is dark gray and light gray, so the cameraman must try to keep the contrasts on his film within that range. Heavy shadows and bright highlights are out, and dark subjects against white skies are best avoided.

Colour films range in speed from as how as 25 ASA to 400 ASA; some can be force developed to higher speeds, but none is as fast as the fastest black and white. They also have less latitude margin for error in exposure. Colour film is in practice divided into two types-negative and reversal. For speed of handling, newsfilm is nearly always shot on reversal stock that is the film exposed in the camera is developed to produce a positive colour image, and can be shown via telecine without the need to make a print. Less urgent film material, such as most documentary footage, is usually shot on negative stock because the process allows more control of quality during printing, and is cheaper.

Although there are several internationally known manufacturers of colour film, the world market is, in fact, dominated by Eastman Kodak. Their negative stock, Eastmancolor II has a speed rating of 100 ASA when used in artificial light; for daylight, a corrective filter has to be fitted to the camera lens, reducing the effective speed to 64 ASA. Reversal stocks are balanced for either daylight or electric light. Eastman Kodak Ektachrome, daylight type, has a speed of 160 ASA; Ektachrome 7240, for use in electric light, is rated at 125 ASA, and Ektachrome high-speed 7250 is rated at 400 ASA.

Matching film to light is important, because colours vary according to the "colour temperature" of the light source. Daylight, except at dawn and sunset, has a large blue content while tungsten light is orange. The human eye rarely experiences an abrupt transition from one to the other, and in any case. it adapts quickly to the change; colour films often do cut from daylight to artificial light, and cannot adapt by psychological means. The cameraman must therefore choose a film balanced for the light he is using or put a corrective filter of the appropriate colour on the lens blue for a daylight film used with artificial light; orange for a tungsten type film used in daylight.

Colour temperature is measured in kelvins (*k*). The scientific basis of this system need not concern us: a fair idea of the scale can be gathered from the face that a candle flame has a colour temperature of about 1800K, an ordinary lamp bulb about 2800K, bright summer sunshine about 6000K or more, and sunset or dawn light around 2000K. Colour temperature is not direct related to intensity of light: direct sunlight reads lower on the kelvin scale than light reflected from a blue sky, and shade readings give a higher colour temperature than full daylight.

Daylight itself, of course, shifts in colour temperature through the day as the sun rises' and sinks in the sky, but in practice conditions remain fairly constant from two hours after sunrise up to two hours before sunset. Variations of cloud and shade are more important during this period than the price angle of the sun, so that provided the weather does not change too much no serious problems should arise.

Where one can run into trouble is in filming with mixed light. In bright sunshine, lamp may be needed to lighten a heavy shadow in a close-up shot. A camera filter cannot be used to compensate because it will affect the whole of the picture. The solution is to use a filter on the lamp a blue filter, which changes the orange tinted tungsten light to the colour temperature of daylight. This also reduces the intensity of the light, but this is a penalty that has to be paid. When faced with a mixture of an artificial light and daylight indoors, the problem can get more complex. The simplest solution is to black out the windows entirely and light the whole scene artificially, as in a studio, but this is not always possible or desirable. The first basic decision to be made is which source of light to standardise on. If the room is filled with good daylight that only needs a little help from electricity, it is best to put blue filters on the lamps. If, as more often happens, the scene must rely mainly on artificial lighting, then it must be shot on unfiltered tungsten film with filters on the daylight. Open doors with daylight coming through them are an almost insoluble problem, but windows can be dealt with by covering them with sheets of special gelatine, tinted pale orange. The smallest chink of unfiltered daylight will appear on the film as bright blue, so the fit of the gelatine must be perfect. This can be a tedious and time consuming operation, not to be considered for ordinary news work, but it is often the solution for documentaries where the view or the light through the window is helpful to either the story or the atmosphere. If the sequence being shot is likely to take some time, it is worth bearing in mind that the light outside may increase or decrease in intensity during the shooting. As it is rarely possible to vary the level of the artificial lighting to match, one must try to get all the shots involving the window into the can at about the same time.

Even worse problems can arise in scenes like a large office or factory interior where one simply has not enough artificial light of one's own and must rely on a threefold mixture of daylight, fluorescent lights and tungsten lamps. Fluorescent lamps are closer to daylight in colour temperature than tungsten lamps, but the exact shade of their light can vary so much that it would be unwise even to suggest a rule about them. In circumstances like these, all one can do is guess, shoot and hope. It's surprising how often these gambles come off. On the whole, viewers tend to accept what they are given so long as it is not too outrageous.

Controlling the Exposure

The next consideration for the cameraman, after choosing his film stock, is the exposure required how much light shall be allowed to fall on the film. A stills photographer can control this by both the size of the diaphragm opening and the length of the exposure. The cine cameraman is confined to a standard exposure time of 1/50 of a second, because he must shoot at 24 or 25 frames per second, and his only control therefore is the diaphragm, which can be opened or closed by an iris device behind the lens so as to let through only a pin-point of light or as much as the lens is capable of transmitting.

In daylight shooting, the cameraman takes a reading of the light with his exposure meter, usually measuring the "incident" light as it falls on the subject. The reading on the dial is then calculated with the film speed to give a diaphragm setting usually expressed as an f-number. The physics and mathematics of f-numbers need not concern us. It is enough to know that the smaller the f-number the wider the diaphragm opening, and the more light will fall on the film. Each f-number represents exactly half the exposure value of the previous lower number. Usually, the marked on the barrel of the previous lower number. Usually, the f-numbers, marked on the barrel of the lens, run as follows: 2,2.8, 4, 5.6, 8, 11, 16, 22. The fl6 setting gives half the exposure of f11, and f22 is half of fl6. Intermediate stops f2.3, f3.2, f4.5, fl6.3, fl2.7 and fl8—are also sometimes marked, exactly half way between the main stops.

Professional cine lenses-particularly zoom lenses are often marked also with T stops (in red). These are similar in practice to f-stops, but differ in that they indicate the amount of light falling on to the film and not the amount entering the lens. This difference can be significant when using a complex lens which absorbs some of the light passing through it.

An important by product of the choice of aperture is the depth of field: the apparent sharpness of a picture from foreground to background. A lens is capable of focusing on only one plane at a time, but objects in front of and behind that plane seem to be more or less in focus according to the size of the diaphragm opening and the shooting distance. A wide opening gives less depth of field than a narrow one. Thus an aperture of f2 might render a scene as acceptably sharp from 5 feet to 23 feet; at f22, the same scene would appear sharp from one foot from the camera to the horizon.

Choosing the Lens

The next decision for a cameraman, after selecting film and exposure, is the choice of lens. The important factor here is the angle of acceptance the width of view the lens will take in. A wide-angle lens includes the full scene approximately as seen by the eyes; a narrower angle lens brings a part of that scene into close-up.

The angle of the lens is governed by its focal length the distance from the optical centre of the lens to the surface of the film. This is measured in millimetres, but is often referred to in inches where these coincide with the metric measurements. For example, a 25 mm lens is usually known as a "one-inch"

The three lenses in the second table opposite would cover practically all requirements for filming news and documentary. The extreme wide angle lenses, like 9.5 mm, distort the image, and anything longer than a 2 inch may require special ancillary equipment to keep the picture steady. The slightest tremor on a telephoto lens is magnified to a wild wobble.

Lens Angles on 35 mm Film or Standard TV Camera

Focal Length	*Horizontal angle of acceptance*	*Also known as*
25	47.5	1 inch
35	35	—
50	25	2 inch
75	16.7	3 inch
100	12.6	4 inch
125	10.1	—
150	8.4	—
200	6.3	8 inch

Lens Angles on 16 mm News or Documentary Film

Lens	*Focal Length*	*Angle*	*35 mm Equivalent*
Wide angle	12.5	40	25 mm
1 inch	25	20	50 mm
1½ inch	35	15	75 mm

If you think about these facts and figures for a while or better still look through a camera viewfinder you will see that a subject can be made the same size in the frame by using different lenses at different distances. A 12.5 mm lens to feet from a subject makes the subject as large in the frame as a 25 mm lens at a distance of 20 feet. But the picture is not the same. The perspective changes because of the change in viewpoint. The easiest way to visualise this is to imagine a straight road with telegraph poles at the side. If you look down the road, the poles seem to be closer together the further away they are. A 12.5 mm lens takes in the whole scene approximately as viewed by the eyes. A 25 mm lens takes in a part of the scene, missing out the widely spaced poles nearby and showing only the apparently more closely spaced poles further away. The longer focus lens is merely magnifying a part of the wider scene not actually taking the eye closer. The longer the focal length, the greater the effect of foreshortening. Conversely, a lens angle wider than 12.5 mm tends to make distances seem longer, particularly near the camera.

These differing characteristics of lens need to be handled warily. A cut from a wide-angle shot to a close shot without moving the camera can sometimes make the background seem to jump closer and simultaneously go out of focus. If an extreme wide angle lens is titled off the horizontal it can make a rectangular building seem to taper absurdly because of the exaggerated perspective. Sometimes, these distortions can be used to good effect: a movement toward or away from a wide-angle lens seems faster than it actually is.

Another factor in using lenses is their different depths, of field. We have already seen that depth of field is affected by the size of the diaphragm opening. As the size of the diaphragm opening for a given *f*-number varies with focal length, wide-angle lenses have great depth of field. A 12.5 mm lens, see at *f* 5.6 and focused at 15 feet, has a depth of field from 3 feet 6 inches to infinity. A 2 inch lens at the same *f*-number and focus would have a depth of only 12 feet to 20 feet. To increase that depth of field, one would have to either increase the light or use a faster film so as to shoot using a smaller diaphragm opening: at f22, the 12.5 mm lens focused at 15 feet would be acceptably sharp from 1 foot to infinity; the 2 inch from 7 feet 6 inches to infinity.

In practice, these limitations and calculations do not loom very large. The modern film camera is usually a reflex type, with a viewfinder that shows a picture exactly as seen through the taking lens. If it looks in focus in that, it will be in focus on the film. The cameraman opens the iris wide so as to get a bright picture on the ground glass of the viewfinder. He then turns the focus ring on the lens until the picture is sharp, then re-sets the iris to the correct f stop for the type of film in the camera. Any normal lens in normal light will leave him with a good depth of field for his shot. It is only in the more extreme situations of long-focus shooting, poor light or big close-ups that he has to pause and calculate. In newsfilm work, there is often only time to guess at the exposure and use a wide-angle lens focused at 15 feet. That copes with nine shots out of ten.

Characteristics of Zoom Lenses

So far, we have considered only fixed lenses, and have not discussed the zoom, although this type of lens has already become standard for all news and documentary filming. The reason for the omission is that in most respects, the zoom lens an any given setting behaves exactly like an equivalent fixed lens. A zoom is an assembly of lenses which can be varied in focal length merely by operating a simple control. This can be done while the film is running, producing the effect of a movement toward or away from the subject. There is, of course, no actual movement of the camera, only a progressive magnification or diminution of a part of the scene.

The chief value of a zoom is its ability to supply quickly any framing required over its range without the need to shift the camera or change a lens. It can also be extremely useful in allowing the cameraman to vary the framing slightly while shooting. If a man talking in close-up starts to use his hands, it can creep back to show his gestures. If a pan is needed from a large subject to a smaller one, the lens can imperceptibly go in tighter to frame, the smaller subject better. The key word here is "imperceptibly." Used slowly over short ranges, a zoom can look very much like a tracking shot; used rapidly and indiscriminately, it can make the viewer feel he is on the end of an optical yo yo.

The zoom is especially useful at sporting events and other occasions where quick variations of local length may be necessary without the interruption of changing a fixed lens. Many of these zooms can be edited out of the film later. When the intention is to use the zoom on transmission, particular care should be given to focus. In the wide-angle shot, there is enough depth of field to give the impression that the whole scene is in focus. But if the detail that is zoomed into is not in the plane of focus, it will become soft and fuzzy as the zoom magnifies it. With a zoom, as with fixed lenses, focus becomes mere and more critical the greater the focal length employed. The usual practice is to focus on the subject with the lens fully zoomed in and the diaphragm wide open, then to set the diaphragm to the correct stop, and zoom back to the wider angle required before shooting.

Cameraman's Equipment

Sheer skill as a photographer may be the most essential qualification for a cameraman, but there are many others that are highly desirable. A newsfilm cameraman in particular needs intelligence, a wide general knowledge, equability of temperament, physical strength, social grace, mechanical aptitude, perseverance, courage, imagination, sensitivity, toughness and a sense of humour. Few have all these qualities; most have some of them.

Newsfilm cameraman usually work alone on silent picture stories; on sound stories, they work with a recordist and probably a reporter.

The equipment of a silent cameraman will probably consist of a camera with spare batteries and accessories, a tripped and a stock of film, all easily carried in a small car. The sound unit is much heavier and more cumbersome. For purely news work, where sound quality must be adequate but not necessarily "hi-fi" the camera will probably be fitted with combined or single system sound: that is, the sound track will be in the form of a stripe of ferrous oxide down the side of the picture film. After the film has passed through the picture gate, it travels on through the camera to the sound recording head, which creates invisible magnetic patterns on the ferrous oxide in exactly the same way as a tape recorder. Between the picture gate and the sound head, there is a slack portion of film and a sprocket wheel, which smooth out the intermittent motion of the film so that the sound can be recorded evenly. This means that the sound is always 28 frames ahead of the picture to which it belongs. There is a similar arrangement in the projector. A combined sound camera must therefore run for at least a second before both sound and picture can be recorded together. Provided both camera and projector are laced correctly, combined sound can never slip out of synchronisation with the picture, which makes for speed and ease of handling while shooting and editing. There are drawbacks, however. The necessary miniaturisation of the recording head and the narrowness of the ferrous oxide stripe mean that sound quality is limited, and the subsequent editing of the film is hampered by the fact that any cut in the picture slices through the sound track as well and not at the point where it is in synchronisation with the picture. In documentary filming, where higher technical standards can be achieved and there is more time both to shoot and to edit, film and sound track are separate double headed.

As well as a camera, with possibly a synchronised tape recorder, the sound unit includes an amplifier, batteries, perhaps a transformer for running the 12 volt equipment off the mains, a tripod and a selection of microphones.

Microphone Characteristics

Some types of microphone are highly directional, picking up sound only from the quarter to which they are pointed; others receive sound from all sides. Some are designed for clipping to the clothing or hanging round, the neck; others for carrying in the hand or slinging on a boom. Sometimes radio microphones are used, which can transmit their sound from a distance without the need of a connecting cable. The correct selection and operation of microphones are as important to the sound as lenses are to the picture, and sound is as important to television as the picture. Unfortunately for the sound man, his requirements often to take second place to the demands of picture making.

The most important factor about sound recording is that microphones and recording systems do not behave like human hearing. A sound is made and the human ear drum responds, just as a microphone does, but between the ear drum and the hearing centre of the brain there are all the complexities of the nervous system and the imponderable workings of perception and psychology, the result is that we listen only to those sounds that we wish to hear or are predisposed to hear. Absorbed in a conversation with a friend we do not notice the sounds of cars outside the house unless we are waiting to be joined by another friend, in which case every car that arrives pushes itself on our attention. Without this built in selectivity our lives would be a bedlam of confused noise which is exactly what you get when you put a micro phone in the middle of any scene of human activity.

It is up to the sound recordist to choose, place and control his microphones so that he records only the sounds he wants and excludes or diminishes the others. In a studio, this is comparatively easy: the noise of the outside words is excluded and the walls are covered with sound absorbent panels to prevent echoes. On documentary and news locations sound problems multiple like flies. Voices in a room sound unbearably "boxy" as they bounce off bare walls and ceilings, water systems groan and gurgle, the distant tapping of a typewriter sounds like a machine gun. Out of doors a light breeze roars across the microphone like a half gale. It is no good waiting for ideal conditions: they rarely come and if they do, the cameraman will probably have loss his light and the subject disappeared.

Wherever recording conditions are reasonably good, the recordist prefers to use a boom microphone like a half gale. It is no good waiting for ideal conditions: they rarely come and if they do, the cameraman will probably have loss his light and the subject disappeared.

Wherever recording conditions are reasonably good, the recordist prefers to use a boom microphone, suspended over the source of sound or a stand microphone angled in the direction of the sound. When background noise is high, he might choose a stick microphone, held by the interviewer a few inches from the mouth of whoever is speaking. This is useful when talking to a group of people, and the need is to be able to go quickly from one to another in any order. Inevitably, this means that the microphone intrudes on the picture, wagging and waving about in a distracting fashion. In practice, it is only tolerable on a news story. When there are only two or three speakers on a noisy location a neck microphone is often a neater solution, this is either hung round the subject's neck, to rest on his chest, or is clipped to the clothing. It is important to remember that neck microphones are designed to compensate for the fact that they pick up chest tones more than the higher frequencies of the voice, and are therefore unsuitable for use in any other way. When it is necessary to pick up sound from distance away, the sound man may use a highly directional shot-gun mike, which is aimed like a rifle at the required sound source, picking up only those vibrations coming from a narrow cone in that direction.

Problems of Sound Recording

Most news and documentary units are equipped to use two microphones at once, the leads being fed into a mixer unit with separate volume control for each microphone. Variations in sound level between two voices can then be monitored by watching the needle on the dial of a meter. Before an interview, the recordist asks for a '"voice level" from the speakers so as to read their volume and adjust! his gain controls accordingly. Even so, surprise variations in level can send his needle bouncing across the dial and cause a distortion in the sound track due to overloading.

Out of doors, there are special difficulties. There is usually more unwanted sound, and the sound that is wanted disperses because there are no walls or ceilings to bounce it back. This means turning up the gain control, and therefore increasing both background sounds and any hiss and crackle on the equipment itself "white noise." Wind can be reduced by covering the microphone with a foam rubber cap. Electronic filtering devices can help too, by cutting out sounds above and below certain frequencies, but they cannot perform miracles, and often the director and recordist must try to judge whether the content of the sound is important enough for bad quality to be tolerated.

News assignments are often plagued with insoluble sound problems, and the recordists equipment is limited in its capabilities. Combined magnetic stripe sound is never of the first quality at the best of times. Fortunately, viewers accept fairly rough and ready results in a news programme.

In features and documentary, particularly with double-head sound, the recordist has more of a chance. He knows, too, that if he gives the film editor certain additional sound tracks it is possible to patch and doctor the sound in the process of editing and dubbing. That is why he engages in apparently ludicrous activities like recording the silence in a room where an interview has just been finished. This "white" background is used to fill in the gaps that are sometimes left when a sound track has been scissored. Birds chirping, traffic noise, wind in the trees are often added in the cutting room to prevent a sudden dead patch or to cover scenes that were shot mute.

All these are straight forward technical jobs which any competent recordist is able to perform, but the good sound recordist often goes beyond them, and makes a creative contribution. He reads the script, watches the shooting, talks to director and cameraman, seeking to improve the end product in his own sphere. He will notice that the noise of a machine has a rhythm that could match the cutting of a certain sequence; he will catch the mood of a misty riverside scene, and record ships' sirens to enhance what the cameraman is hooting; he might suggest laying the sound of children at play over a shot of an old couple walking down the street. He may find that the sound he needs is not to be had where the cameraman is shooting, and make a note to record it elsewhere at another time. Good sound is a much a contrived illusion as good film for a film unit, actuality is merely raw material.

A newsfilm cameraman is very much a one-man band, and in Britain is classified in union agreements as a cameraman director. His assignments are as varied as the world itself, and often he has no idea from day to day whether he will be filming a flea circus or a war. Most of the stories he is sent on are, however, more or less predictable the diary events that make up three-quarters of news assignments: a flower show, the comings and goings of politicians, a first night, an interview. His work begins with thinking about the assignment. What is the story likely to be, what will be the lighting and lens requirements, how long will he have to do the job, and how Soon must the film be back at base?

If he is covering a flower show, it is unlikely that the office will want merely a few pretty pictures, there may be a new variety of rose, with a strong scent, that will be in everyone's garden in a few years' time; there may be a visit to the show by some public figure or personality, or the show may attract enough visitors to cause traffic jam that makes a story in itself. On some of these points he will have a briefing from the news desk a note from the editorial staff, a newspaper cutting, a Press handout, a few words with the assignments editor. Time spent in reconnaissance is seldom wasted, and he will try to arrive at the location early enough to look around. A silent picture story usually runs to only a minute or less, so every shot must count.

If the story is the new variety of rose, he must find a way of dramatising it so that it stands out from the mass of other flowers at the show. How can he communicate the scent on film? When will the bush arrive, how will it be displayed, who was responsible for breeding it and will he be there? Are there any security precautions surrounding it? Ought he bring back a bud for the newscaster to wear in his buttonhole? Can he find a pretty girl with the right colouring to be filmed with the rose? How much is the bush worth, and how can that be brought out in the picture?

He discovers that the rose will be brought by special van to the rear entrance of the show. That could look drab and anti-climatic or it could have an air of cloak and dagger about it. He decides to shoot it, but makes a mental note to provide an alternative opening to the film in case the idea does not work.

In fact, it does work. There is a small reception committee of show officials, including a uniformed security guard, in the otherwise deserted street as the bush arrives and is hurried indoors. Our cameraman enlists the co-operation of the officials and gets the bearer of the rose to make his entry two or three times while he films it from different angles so that the film editor can cut the sequence neatly and economically, ending on a shot, of the hall doors closing behind the precious bush.

He then enters building himself, and goes ahead to the stand where the rose will be displayed, which has been lit according to his instructions by his electrician. A quick check of the light values, a change of film or filter, and he shoots the arrival of the rose. The positioning of the bush on the stand takes an inordinate amount of time, so he shoots a couple of "cut in" pictures of people looking on this will enable the film editor to shorten the main shot by substituting a few seconds of the onlookers for many seconds of main action.

The show is not yet open to the public, so now is a good opportunity to get some close up shots of the bush and its blooms while there is still elbow room to position the camera and the lights. He decides to film the close ups in long focus from a little distance away so as to throw any distracting and irrelevant background out of focus and concentrate the eye on the flowers. He decides to add a back light to give more outline to the petals, and as a final touch asks for a drop or two of water to be sprinkled on the buds. The back light will sparkle on it. The zoom lens makes it easy to get the close ups without much moving of the camera. He then does a shot of the man who bred the rose smelling its scent and making final adjustments to the display. Already, the breeder is worrying about the effect of the heat from the lamps on his precious bush, and has to be reassured that it will all be over in a moment or so. In conversation, he mentions that the new rose is probably worth about £50,000 to him.

The next task is to film the general public's reaction to the new rose. Dedicated gardeners often have characterful faces, and there should be some good close ups to be had. But first there must be a long shot of the crowd to establish their number and to remind the viewer that this is a big flower show. Lamps must be re-positioned to give as big a spread of light as possibly with the limited resources available. They are not strong enough to illuminate the scene, but at least they prevent the background from disappearing into total blackness, and they are far enough away for their inappropriate colour temperature not to matter too much.

Our cameraman decides to light three planes, leaving a more or less shadowy gap between each, with the background being left to look after itself. The result will not be perfect, but it will have some depth in it. The spread of light means that the overall illumination is less than it was for the close ups of the roses, so the diaphragm must be opened wide to f2. This cuts down the depth of field, but it will be a wide angle setting on the zoom, so that will largely compensate. Perhaps there is time to take off the zoom, and use a fixed wide-angle lens instead? It would transmit half a stop more light to the film.

All the time, the problems journalistic, dramatic and technical are running through the cameraman's mid as he sets up his gear, instructs the "sparks," and carries on a cheerful conversion with the idiot who has attached himself to the unit, and cannot diplomatically be told to get lost. More diplomacy is needed when the crowd enters and the long shot is being filmed. Half the people stare at the camera instead of at the roses, and there is always a small boy who waves or pulls faces straight into the lens. They must all be persuaded to co-operate.

After the long shot, there are the close ups. Now the lights can be concentrated on the area opposite the new rose bush, and the camera removed; to some twenty feet away, where it will not be noticed so easily. The cameraman keeps an eye open for good characters, and focuses on them as they come into the light. Once again, he is using a long focus setting on the zoom, with its limited depth of field, but this time his subjects are moving, so they can easily go in and out of focus. It's a risk that has to be taken. If the camera were taken in closer, using a wide-angle lens, the reactions would be to the camera, and not to the exhibit. This way, he gets some good shots of people sniffing the perfume of the roses.

Before leaving the flower show, the cameraman gets an exterior shot of the front of the hall with people entering, then sees a shot which might help the film commentary writer to make the point about the value of the new rose bush. A Rolls Royce is sparked outside, a coach built version worth about 50,000.

Back in his car, the cameraman unloads his camera, packing the film in the cans it originally came from, marks the working title of the story on the cans, and writes up his dope sheet: a list a shots taken and a note about the estimated values of rose and Rolls Royce. To it, he clips the show catalogue and any other useful bits of paper, then it's back to the office to hand over the film to labs for development, and the dope sheet and other information to the writers. Several hours of work have produced 150 feet of 16 mm film which may well be cut to no more than a minute of screen time or perhaps never be used at all.

This type of diary assignment gives the cameraman time and opportunity to think out and plan his shooting. He is, in effect, a one-man production team, working on a midget documentary on a spot news story, he must be ready to catch events on the hop.

Covering a Spot News Story

A newsflash comes over the teleprinter fire at a paint warehouse. Armed only with this and the location of the fire, he sets out with no idea of how the story will turn out. As an old hand, he knows enough to take some protective clothing an old hat, a waterproof coat, gum boots, a pair of gloves. As an old hand, he also knows that most fires look alike on the screen unless some special feature is clearly picked out in the viewfinder. This one should be fairly spectacular, it's probably a big paint store, being in the docks area, and there must be a lot of other buildings close by. As he nears the scene, he notices the large could of black smoke billowing up. Worth a shot? No. It is not spectacular enough yet, and by the time he finds a good vantage point to film it, he may be missing better shots closer to the blaze.

Sooner or later, his car is stopped by police, A quick word, and he is allowed to park out of the way of fire engines. On with the protective clothing, stuff some spare rolls of film, in the pockets, sling the camera battery over one shoulder, and go in on foot. As the earliest cameraman on the scene, he must get first the basic shots before trying to build up any special story. He starts to look for scenes that show the blazing building with some action in the foreground to give it scale. Check the exposure value of flames, daylight and shadow, work out a compromise diaphragm setting, focus the lens at fifteen or twenty feet, set the zoom at wide angle. This is no time or place for a tripod: if necessary, the camera can be kept steady by leaning on a wall or resting the elbows on a car roof.

After establishing shots of the blaze itself, he turns to cut in shots of the firemen, their faces lit by. the orange glow. A low angle will dramatise them, so he drops on one knee and shoots up, keeping the hoses and water jets running from corner of the frame. The sound of a siren alerts him to the arrival of another fire engine, and he gets a shot of it drawing up and the firemen leaping out. As soon as their feet touch the ground, he switches off, hurries round to another angle and films again as they unload their gear. With so much movement and the change of angle, it will all look like one continuous action.

With nearly a hundred feet shot, there is enough now to give the basic coverage of the story, and there is time to find out how the fight against the fire is going. Keeping an eye on the blaze, he seizes the chance to talk to a fire officer. The firemen, he learns, have written off the paint warehouse, and are now trying to prevent the flames from spreading to the buildings nearby. What do they contain? Sugar. The only evidence of this on the outside is the name plate of a well-known sugar firm. He finds an angle to film this, and pans from it to the burning building, then films the firemen spraying the roof with water. Sparks are falling. Looking around, he sees a pool of water, and films a close shot of the sparks failing into it. This takes some time. Such shots always do. The problem is to find an angle where the sparks can be seen clearly and separately from the general orange and yellow glow over everything. To integrate the shot more closely with the rest of the footage, he seizes the chance to ask a passing fireman to walk through the puddle, and pans with his feet into a long shot of the sugar warehouse.

It is now 3 p.m., the next news cast is at 5.45 p.m. There is just time to get the film back. He hurries to the car, and calls the office on the radio. They tell him to say with the story. A despatch rider is on his way to collect the film, and is telephoning into know exactly where the cameraman is. The news desk has been following the agency tapes on the fire story, and there is a report that sabotage may be involved. They have decided to send an ENG unit. Does he know that a fireman is reported seriously injured?

Rapidly, the cameraman scribbles a dope sheet, parcels up the exposed film with camera tape, and leaves it on the seat on the seat of the car. He reports what he had done and the exact position of the car, to the office, then heads back to the blaze, taking fresh film with him.

Contact with base is vital for a cameraman. Nothing changes and develops so fast as news, and what looked like a number one story at nine o'clock can be relegated to the spares category at ten. A reporter or cameraman who does not check with base" is a liability to the office and to himself.

Shooting News Interviews and Speeches

On both these assignments the flower show and the fire, we have imagined a mute camera, but there is little doubt that a sound unit would have produced a better story: the comments of the visitors to the show, the roar and crackle of the flames, the shouts of the firemen would all have added another dimension to the pictures, apart from the value of any interviews. Most television stations today have only sound units of ENG units with sound and they nearly always work with a reporter. A large part of the work consists inevitably of interviews, because at least half the world's news consists of words rather than pictures.

The technique of shooting news interviews allows few variations, one needs to sea the face of the man talking, one needs to be able to shorten what he has said, and it may be possible to cut in a shot of what he is talking about. Usually, the best angle is a three-quarter medium shot, followed by a head and shoulders close up and perhaps a big close up. The first questions and answer may be done in a two shot, showing both interviewer and subject to establish the scene.

Having chosen which side of the subject he is shooting, the cameraman must stick to it, otherwise the shots will not cut together smoothly. A cut from the right side to the left will give the impression that the subject has suddenly jerked himself round. Any shots of the interviewer asking his questions must also be short from the same side, from an angle complementary to that of the shot of the subject.

Variations in size of shot are vital to subsequent cutting of the interview. An interview shot all in one lens angle would jerk at every cut. If, however, the cut takes us to a closer shot or a different point of view it is almost unnoticeable. In the old days of fixed lenses this meant interrupting the interview while the cameraman changed lenses. Nowadays, he can zoom in or out while the interviewer is asking a question or while the subject is replying. If he zooms during a question, it allows the editor to cut out the zoom, omit any number of question and answers and rejoin the film at a later, stage in the interview. If it turns out that the point at which he wants to resume the interview is in a similar lens angle, then he will need to use a cutaway shot to cover the ugly jump in the picture. The usual cutaway in an interview is a shot of the interviewer, either listening or asking a question. This is why at the end of an interview the cameraman is turned on the interviewer and he repeats his questions, as well as providing a number of shots of himself listening and perhaps nodding or smiling.

These techniques are discussed more fully in the chapter on film editing, but they are mentioned here because no film editor can cut a film properly unless director and cameraman provide the right material to work with.

When filming a speech, the same principles apply. The lens angle must be varied frequently, and the cameraman must use every opportunity to provide cutaways. Applause gives him an excellent cue to pan off the speaker to the audience. The editor can then cut back to the speaker at any point. Another useful shot, if the opportunity arises, is from behind the speaker. As his lip movements do not show, this can be used to cover any cut in the main shot from the front, while the sound track continues apparently without interruption. Again, this cut in must be done from the same side of the speaker as the main shot, and preferably at a complementary angle.

Speeches are difficult assignments unless there is foreknowledge of what is going to be said. They may go on for half an hour or more when all that the programme needs is one key passage. Fortunately, it is often possible to get an advance copy of the speech or if not to get an idea from the speaker of when the section required is going to be uttered. Whenever there is doubt, it is better to switch on early rather than late. During the unwanted passages of the speech, it should be possible to get a number of cut in shots for the editor's benefit audience applause in various angles, extreme long shots of the speaker and some shots of the audience quietly listening. These may be useful not only as cut-ins during the speech, but also to cover any passages of linking commentary.

Covering Sporting Events

Most coverage of sporting events is now done by multi camera OB units on video-tape, but it still occasionally falls to the news cameraman. Here too, he cannot afford to shoot the whole of the match, but cannot of course have any certain knowledge of how the game will develop. In football, he must rely on spotting the attacking movements that are likely to lead to a goal, and shoot them all. When there is a goal or an incident of big interest he makes a note of the footage at which it occurred and writes it on the dope sheets so that the film editor can find his way through the pile of film quickly. This is even more necessary with games like cricket and baseball where it is virtually impossible to spot an incident until it has actually happened, and one must shoot almost non stop. Cut-ins are vital in this kind of shooting too crowd shots, spectator close ups, umpires, score boards. For speed of handling by the editor, it is helpful to shoot cut-ins either just after a major incident or all together at the beginning or end.

Shooting Sound Film

Although sound cameras tend to be used mainly on the set-piece diary events, they turn in their best footage when used on spot news a demonstration, a riot, a war, a disaster. A mute camera can record powerful images, but they always have a remote quality; with sound a situation comes to life in all its noisy reality. Some sound and ENG cameras can be hand held in the middle of things as they happen.

Sound shooting of this kind results in much longer takes than would be normal with a mute camera. Film or tape must go on rolling for sound to be recorded in a continuous way and not broken up into useless, disconnected fragments. A film camera with combined sound must be run for just over a second before picture and sound are in synchronisation. Too much switching on and off would leave much of the sound overlapped on to previous shots, and therefore uncuttable. Often the sound track becomes the most important part of the film, and the cameraman must put up with a badly framed picture, perhaps out of focus or wrongly exposed, for the sake of keeping the recording going.

Documentary techniques for shooting film or video-tape are merely a more sophisticated version of those used for news shooting. More time for both shooting and editing means that interviews can be shot at much greater length and edited at leisure. Instead of the simple, hurried set up, the interview can take place while the subjects walk through a house or a garden or a factory, with the camera either hand held or on a dolly. Time can be spent shooting elaborate cut in shots to cover cuts or interruptions met en route. Whole picture sequences of relevant material can be filmed to cover long stretches of dialogue, and to illustrate what is being said. Even if a combined sound camera is used, there will be time to re-record the sound on to a separate magnetic track later on, and cut as though the material were double head.

Foreign Assignments

Reporting from foreign countries, whether of daily news or of less urgent material is much more difficult for television than for a newspaper or news agency. Whereas a newspaper can tell a reporter to pack a bag and go, television company has to organise a crew of anything from two to ten people go to a location, together with 200 kg of equipment. This is an expensive exercise, and all the usual problems of customs, visas, medical certificates, insurance and transport are multiplied. Cameras, films, lenses and recorders are to customs officials like carrion to vultures, and massive amounts of paper, in the form of documents, bonds and sometimes hard cash are needed to placate them. Most large television stations have a department or travel to deal with these difficulties, but it is useful for the camera team to know the basic principles involved.

In addition to their own personal documentation, the crew need papers to cover all the camera, sound and lighting equipment, plus enough money to put up bond as guarantee of compliance with foreign customs regulations, alternatively, the re-export of the equipment may be guaranteed by an agent in the country concerned. The essential component of the equipment documentation is a list describing every item, with serial numbers where available. This list is checked, stamped and signed by British customs on departure and by foreign customs on arrival. Inevitably, this takes time, and the crew usually have to allow for this at airports.

Film, exported unexposed and re-imported exposed but undeveloped, poses problems for officials, but procedures have been evolved for handling it quickly, usually through a specialised agency at the airport. News film and tapes are duty free on entry to Britain, and that category is extended to documentary film. Since film and other visual material can now be transmitted freely across frontiers by landline, radio and satellite, it seems unnecessary to fuss over the same material at airports. The authorities, however, are reluctant to withdraw this control at airports even though it does not serve a serious purpose any longer.

In Western Europe or North America, interference with the passage of information is usually no more than a bureaucratic nuisance; elsewhere in the world, the authorities often treat newsfilm as though it were a dangerous drug or explosive. Some countries insist that visiting camera crews be accompanied by official guides or "interpreters", often with power to prohibit filming of anything they think may be undesirable to show on foreign screens. Most British television reporting teams regard such restrictions as a challenge, and there are dozens of dodges for getting round them. While some of the film crew ostentatiously set up their cameras at an acceptable location, the cameraman can sometimes pick up the required scenes surreptitiously on a second camera. You can pose as a tourist, and film unmolested in places where a professional would be arrested as a spy. Cameras can be concealed in briefcases or in cars, telephoto lenses can be used to shoot from distant hiding places. Film can be smuggled out or sent by diplomatic bag. The need for these stratagems obviously delays and diminishes the coverage possible, and to that extent such government restrictions succeed in the short term; but in the long term it is the regimes themselves which have most to lose by distorting and confusing their own communications with the rest of the world. It is impossible to manipulate other people's perceptions of reality without damaging your own in the end.

Protection of Gear

A crew going on foreign location may well be unable to use the normal back up facilities available, at home, and should aim to be as self-sufficient as possible. Most experienced cameraman carry a kit of tools and spares that enable them to tackle minor running repairs, as well as accessories which they are likely to need in particular locations. The voltage and frequency of electric current varies from country to country, plugs and connections differ in design, and some items and materials may be unobtainable on a foreign location. It is an elementary precaution to establish these facts before leaving for some locations, the equipment itself may need special protection and preparation against dust, high humidity or extreme cold. In some tropical countries, damp and fungus can penetrate between the elements of a lens, and in the arctic the lubricant in the camera mechanism congeal, while the film or video-tape can become brittle and pick up static electricity.

Camera, equipment is normally securely packed in padded metal cases designed to withstand the hazards of travel, but when travelling by air you can never be sure that it will have survived unscathed. On arrival, therefore, it is a wise precaution to expose a hundred feet or so of film as a test, and send it back to base for viewing and comment. On considerable benefit of electronic cameras is that the crew can see for themselves, within minutes, the results of a test by playing back the tapes on location.

As well as protecting the gear, the crew should protect themselves. It is wise to take medical advice about vaccinations and injections beyond those legally required and to take anti-malaria tablets in many areas of the those legally required and to take anti-malaria tablets in many of the tropics. When going beyond the reach of reliable medical services, at first aid and antibiotic kit can be a life saver, particularly in coping with gastroenteritis and dysentery.

The first duty of any crew arriving at their destination is to report back to base, giving telephone and telex numbers, and then to link up with any helpers or contracts. In pursuing a difficult or even dangerous assignment it is easy to forget that the aim is to get the pictures back to base, just as much as to television stations and bureaucracies, and often it is more important to solve this problem before actually shooting any material for the story.

Large documentary units are provided with unit managers to deal with logistics, finance and communications; in smaller units, most of the work falls to the PA. News units, consisting of cameraman, sound recordist and reporter, have to divide the work among themselves. The reporter is usually the link with the home or foreign news desks and the cameraman is responsible for sending films and tapes back to base.

ROLE OF EDITORS AND PRODUCERS

Most people outside television are thoroughly confused about the distinctions between a producer, a director and an editor, which is hardly surprising because these functions are often combined by one person, or the responsibilities are shared in different ways according to the type of programme or the preferences of those concerned. More complications arise because there are differences of function between cinema and television producers and directors, and there are differences of nomenclature between the BBC and the independent television companies. To spend time analysing and explaining all this would be tedious and unedifying, so let us merely the terms as we shall be using them in this book. They are as near to a consensus as possible.

1. An editor is the chief executive of a current affairs programme or series, in overall charge of content and style.
2. A producer is responsible to the editor for presentation, facilities, personnel, budget and organisation in general. In less strongly journalistic programmes such as documentaries or chart shows the producer also files the role of editor as described above.
3. A director, selects and controls the actual sequence of pictures and sound that go on the air, usually answering to the producer in technical and logistic matters and to the editor on matters of content.
4. A PA, or production assistant is an aide secretary to the director, responsible for script typing, ordering of facilities, paper work and timing of the programme as it is recorded or transmitted.

The exact nature of a producer's job depends on the size of the production team and to some extent on his own choice. Some producers like to be closely involved in the mechanics of a programme from script to transmission, bobbing in and out of cutting rooms and offices, chasing, cajoling and questioning. Others believe they should pick the right team, create the conditions in which they can give of their best, then leave to it, intervening only to make final decision on policy, content, budget and presentation. A documentary film may be a highly personal essay by the producer, in which case he may also write and direct it himself; or it may be the director's baby, and the producer will supervise and organise. A major news magazine may have scores of people on the team, and the editor becomes a kind of creative executive and administrator.

In all kinds of current affairs programmes the editor's and producer's chief concern is style. As Grace Wyndham Coldie, a former current affairs chief at the BBC, pointed out, all magazine programmes consist of the same basic ingredients a man talking to camera, films and interviews, often on the same subjects as the rival programme. The only distinguishing factor is style the characteristic slant and attitude that makes each programme as recognisable as someone's hand writing. It may be the producer who sets the style or it may be the presenter whose own personality dominators; style may even evolve, apparently out of nowhere a kind of consensus of everyone on the team. Wherever it comes from, it is up to the editor and producer to cultivate it, to see that it runs through the whole programme from title music to the lettering of the end credits.

At programme conferences, the line of approach to any subject must be discussed and defined: what are the essential facts, which are the key questions, how can the issues be best illuminated? Woolly thinking at the outset leads to muddled presentation in the end. The more clearly the style of programme is established, the easier the programme is to run. Style is self perpetuating. Staff observe, absorb and develop it, and come to know intuitively how to handle any story. Initially, style can be difficult to find in the end, it can be difficult to lose. So it is important to get it right.

Everything can contribute the presenter's style of dress, whether the chairs are upright or easy, the lighting, the colour of the drapes; but these things will not create style, any more than the addition of brandy sauce and a sprig, of holly will turn a haggis into a Christmas pudding. Style arises firstly from a concept of what the programme is for and what its audience is, and secondly from carrying that idea through every detail of script, presentation and production.

Style that is more than a superficial dressing enters into the structure of a programme. It helps us to find the beginning, the middle and the end. The beginning is always the most important. Television programmes and competing for attention minute against other programmes and distractions. How in the words of Barnum and Bailey are we to get the customers into the tent? It is not enough to have an interesting subject and important things to say. Television is a mass medium, and it makes no sense, financially or artistically, to make a worthy programme that no one watches.

A subject or a story must be sold as well as told. Shakespeare knew this. *Romeo* and *Juliet* begins with broad comedy and a brawl; The Tempest with a shipwreck; Richard III presents us with a monster half comic and half horrifying the opening scene of Hamlet is filled with supernatural error. We, too, need action, conflict, laughter positive response from our audience right at the start.

Keeping the Audience Interested

Having got the customers into the tent, how are we to keep them there? This was less of a problem for Barnum and Bailey because by that time they had the customers' money. In television, the audience have made no financial commitment, and have no reason to stay in the hope of getting their money's worth. If they are bored, they will probably leave, and just as probably not come back. We must keep them wanting to know what happens next, make them curious, then satisfy the curiosity, building each successive part on the one that goes before. If there, is a commercial break, we must leave the audience wanting to stay with us for the answer to a question, the result of a conflict, the fulfilment of a promise. The graph of interest, emotion and involvement must rise and fall in the right places.

In current affairs, this must be done without going beyond the facts, and without distortion of the truth. A reputation for honesty, fairness and accuracy is not easily gained and is very quickly lost. In the last analysis and in the long run, this is more important than anything, but there is no reason why we cannot have both truth and drama.

Budgets and Costs

Production, like politics, is also the art of the possible. The producer must reconcile programme ideas and ambitions with the available hardware, people and money. He is responsible to his departmental head for the budget. How the budget is arrived at can be a mystical question, especially for current affairs programmes, where the value of the end product cannot easily be quantified. A newspaper with a known circulation and advertising rates and a known competitive situation can work out some kind of sum on that basis for its editorial budget. A light entertainment show in television has one main objective to please as many as possible, and spends as much as is necessary or can be afforded to achieve that audience. The aims of a current affairs programmes are more complex and less easily calculable.

In the BBC, a programme exists as part of the Corporation's duty, under the Charter to "inform, educate and entertain." The allocation of money it receives depends on the total amount available from licence fees, the demonstrable needs of the programme, the size of its audience and some highly subjective judgements about its intrinsic merit-plus whatever the producer can extract by his BBC manship.

In ITV, a current affairs programme exists as part pf the company's obligation under the Television Act to provide information, education and entertainment and a "sufficient amount" of news and news features; but as the companies are in business to attract advertising and make money they naturally tend to put entertainment first, because that is indubitably what attracts viewers and therefore advertisers.

On this basis, one might expect a commercial television company to spend as much as was needed on light entertainment and as possible on current affairs. In fact, it does not work out like that. Even on purely self-interested commercial calculations, the companies recognise that if they must put on current affairs programmes they might as well be good ones, and attract as big an audience as possible. They are also aware that good information programmes are part of the price of retaining their licences from the IBA, and are useful for prestige, influence and image.

In recent years, too, it has been demonstrated that news and information can not only hold but even attract Top Ten audiences. ITN's News at Ten is one example. On top of all this, some of the companies actually want to do this kind of programme for its own sake. Their budget allocations reflect these considerations, with a bias toward those programmes which attract most or lose fewest viewers, and those which are most likely to win favour in the IBA. There is also the producer's own skill in extracting the extra bit of margin for his own show.

The actual, figures will probably be itemised under various headings for purposes of checking and comparison:

Heading	*Budget*	*Actual*
Script fees	£500	£300
Artists, communicators, etc.	1,000	800
Other direct cost personnel	400	500
Appearance fees	200	170
Design and sets	150	100
Film, stock, lab costs, etc.	500	350
Extra facilities	200	100
Staff expenses	300	220
Insurances	50	50
Hospitality	100	130
Properties	30	12
Music	40	25
Copyrights	60	70
Transport	200	120

What is underspent or overspent in any one week can be redressed in the following weeks, and often savings under one head can be applied to other purposes.

These budget figures do not represent the total sum spent on a programme. Staff salaries, studio costs and all the constant overheads are excluded—or accounted for by appointment "below, the line." The "above the line," "external" or "direct" costs are an attempt to reflect the variables in one programme as compared with another. Where the line is drawn between the two categories depends on the accounting practice of the station. Some, for example, count overtime against the budget; cables and telephone calls may come above or below the line; certain facilities may count both above and below to some degree. Conundrums and anomalies may be found by the dozen, but no system can be absolutely fair and accurate without becoming too complicated for anyone but an accountant.

Video-tape and Film Cost Comparisons

Some of the difficulties are shown by recent studies of the relative costs of Outside Broadcast video-tapes and location filming. The consensus of these investigations seems to be:

1. The average film crew is seven people compared with at least fourteen on a small OB unit.
2. Film crew cost 50 per cent more in wages per man than OB teams.

3. Travel and subsistence for an OB unit can cost five times as much for film (due to extra fuel costs and slower travel as well as the extra men).
4. OB lighting, where required, can be much more expensive than film lighting because the whole of a scene may have to be lit at one time rather than each individual shot.
5. Film carries a higher burden of post production costs developing, printing and editing; with video-tape this either does not exist or is negligible in direct cost.
6. An OB unit takes longer to set up than a film unit, but can produce more material in a shorter time once it is in operation.
7. The capital costs of a small OB unit with VTR can be fifteen or twenty times as much as for a sound film unit.

Capital costs or amortisation and maintenance are not usually shown on direct budgets, and OB units therefore remain competitive as far as the producer's above the line budget is concerned. How competitive depends on the length of the insert. For five minutes of air time or less film is clearly cheaper; for ten minutes or more the greater productivity of an OB unit makes it more economic, provided that travel is limited to, say, fifty miles from base.

These are the kinds of consideration a producer must be aware of, although in fact his decision whether to use film or OBVTR or any other alternative depends more on factors that cannot easily be expressed in figures: a film unit is more mobile and flexible, and can produce livelier visual material; it is likely to dominate any subject it covers; the triumvirate of reporter, director and cameraman forms a more tightly-knit and creative team than the OB Juggernaut. On the other hand, continuous coverage of uninterrupted action can be done satisfactorily only by multi-camera OB. In many circumstances, calculations of this kind weigh heavier than those of the accountant, and it is the producer who must decide.

Responsibility for Staff

Staffing, too, falls to the editor, if not to decide absolutely, at least in part, and his choices here can be the most important he ever makes. Three good men are more useful than ten mediocrities, and most editors will opt for quality rather than quantity. There is never any shortage of applicants: the doors of television studios are besieged by eager arts graduates, journalists and would be writers or performers, but it is significant that a producer is likely to spend as much time wooing established talent as seeking out fresh. This is not entirely timidity or laziness: as an editor, one comes to learn that barely one in twenty of the applicants is worth hiring. It takes a long time to find that one and train him, and the profession is crowded anyway. The ones who are hired are likely to have given some kind of proof already of their mettle in some other job: they will have more than an interest in television, it will be a consuming passion, and it will be difficult to keep them out.

People of this type and calibre do not make docile employees: they are likely to be eccentric, aggressive and temperamental. Considering how the stresses of the business must accentuate these foibles, it is astonishing how many of them are also charming, likeable and reliable. The editor must deal with them as best he can. This book is not concerned with personnel management and psychiatry, but it is worth making two points: television people can be led but not driven, and they work better if given as much responsibility as they can carry. An editor does better to delegate and hold people accountable rather than prescribe in detail what they should do and how they should do it. But he should be prepared to carry the final responsibility. He, after all, chose his team.

Responsibility for Legal Aspects

In current affairs, particularly, an editor is also responsible directly or indirectly for the legal aspects of his programmes. In Britain, these fall into six categories:

1. The Television Act, 1964.
2. The Representation of the People Act, 1969.
3. Defamation.
4. Contempt of court.
5. Protection of minors.
6. Copyright.

Television Act

The editor producer is responsible to his company, which is responsible to the IBA, for observing the Television Act. There is no direct legal responsibility on the part of the producer. As well as making specific laws about advertisements, programme schedules, matters of public controversy, shareholdings, hours of broadcasting and so on, the Act confers wide powers on the Authority to make regulations and draw up codes of conduct and practice.

For the journalist, the main concern is balance in matters of controversy to ensure that all points of view are fairly represented. The balance can be within the programme itself or be maintained over a period in a series of programmes. As between the main political parties and the leading churches, this is a fairly simple matter, but problems can arise on subjects where opinion is fragmented. A subject which has given rise to a dispute within a political party may require more than one spokesman from that party while not calling for more than one from another party. These problems have to be dealt with on their merits.

Payments or "valuable consideration" for the inclusion of any item or reference in a programme are forbidden, and nothing must be included that might be thought to have been suggested by an advertiser.

Representation of the People Act

The main provision of the Representation of the People Act that concerns an editor is Section 9, which provides as follows:

> Pending a parliamentary or local government election it shall not be lawful for any item about the constituency or electoral area to be broadcast from a television or other wireless transmitting station in the United Kingdom if any of the persons who are for the time being candidates at the election takes part in the item and the broadcast is not made with his consent; and where an item about a constituency or electoral area is so broadcast pending a parliamentary or local government election there, then if the broadcast is either made before the latest time for delivery of nomination papers or is made after that time but without the consent of any candidate remaining validly nominated, any person taking part in item for the purpose of promoting or procuring his election shall be guilty of an illegal practice, unless the broadcast is so without his consent.

This remarkable piece of English prose implies a good deal more than it sets down, whether by accident or design no one knows for sure. In effect, it means that if one candidate refuses to appear in a programme, then none of the others can. It can also mean in practice that a candidate can make it a condition of his appearance that a certain subject shall not be included in the discussion or that the programme shall be presented in a certain way. Whether it was the intention of Parliament to give such powers to politicians over free speech is not known. Fortunately, it applies only to "items about a constituency", thus leaving of politicians outside their constituencies subject only to the general IBA and BBC rules of fairness between the parties.

Once a politician goes into his own constituency, it is still an open question how much news concerning him is reportable during an election without the permission of every candidate. Lawyers disagree over the interpretation of phrases like "items about a constituency" and the meaning of "take part." If the films a candidate on his soap box at a street corner, and he is aware of the cameras, to what extent is he taking part in a broadcast? In the 1970 General election, a certain candidate was filmed at a constituency meeting in such a way that the locale was not apparent, and no reference was made to it in the introduction. This care was negated when an opposing politician elsewhere, interviewed about the speech, mentioned the constituency. So far no one has been hanged or transported as a result. This is the most encouraging feature of the whole situation: the general reaction of producers and editors has been to push reporting to the limits of the law, and perhaps a little beyond. The ground thus gained is unlikely to be lost, because no government or political party will want the opprobrium of seeming to stifle honest reporting. Section 9 may yet go the way of the fatuous "14 day rule" which at one time forbade televised discussion of matters about to be debated in Parliament. It died of its own absurdity and impossibility of enforcement.

The Television Act and Representation of the People Act apply only to television and radio; the remaining laws apply to the public at large.

Defamation

Libel is a notoriously complicated branch of law, and the following is no more than an outline. All television stations have a legal adviser, who should be consulted when there is any doubt. It is possible that an editor, as well as his company, may be held personally responsible in law.

A libel is any statement published in writing or other permanent from that could hold up a living person to public ridicule, hatred or contempt or injure him in his profession or trade. It does not matter whether one is the originator of the statement or is merely quoting it the responsibility is equal. A television broadcast, whether live or recorded, is treated as "permanent." The complaint does not have to prove the statement to be untrue or that he suffered any actual damage or that anyone did in fact believe the statement to be about him: it is enough that these things might reasonably be so. In libel, the defendant is in effect guilty until he proves himself innocent.

The defences are:

1. *Consent:* If a man agrees to the publication of defamatory matter about himself, then he cannot sue. But it is important to establish exactly what the consented to.
2. *Justification:* The publisher of the libel must prove the truth of the statement in substance and in fact, and any innuendo arising from it, right up to the hilt. This defence is not open to any statement containing an element of comment.
3. *Fair Comment.* The plea here is that the statement was not only true in substance and in fact, but was fair comment on a matter of public interest. The defendant must establish the truth of the statement, and must show that any expression of opinion was fair and was on a subject which was genuinely a matter of public concern. Comment on someone's private life, no matter how true, is not protected unless it can be shown that it affects his public life.
4. *Privilege:* This is a plea that whether a statement was true or not it was made on a "privileged" occasion which renders it immune. As far as the journalist is concerned, the privilege is never absolute, but always "qualified." This defence applies in its widest form to fair and accurate report of Parliament and courts of law. The law reports must be contemporancous and in a newspaper or news broadcast. As long as the reporting is fair and accurate, the actual truth of statements quoted need not be proyed. Reports of what is said and done at meetings of town councils, official tribunals and inquiries, etc., are protected so long as the matters reported are of genuine public interest, and so long as anyone defamed is given the right to reply. Similar protection is given to reports of learned societies, trade and

sporting bodies, public companies and official international organisations of which Britain is a member.

5. *Innocent Publication:* This is a strictly-limited protection in cases where someone has been defamed by a coincide of names or by a circumstance that the publisher could not possibly have been aware of. If the publisher then offers a correction and an apology, and that offer is accepted, there can be no libel action. If the offer is rejected, the publisher can still plead innocence as a defence.

Generally speaking, one can libel only a person or a firm, not a class of people unless the class is so small that each and every one is justified in taking it personally. Nor can one be sued by or on behalf of a dead man. Ignorance and inadvertence are not in themselves a defence, and an apology or correction does not prevent most actions. Malice or any ulterior motive, if proved by the complainant, will often destroy any defence. Libel is a legal minefield where even a specialist lawyer must tread with care.

As well as libel, there is a class of actionable statement known as "injurious falsehood" or "slander of titled." This is any statement that a plaintiff can show was a about him, b untrue, c caused him actual financial loss. The burden of proof is upon him. The defence of privilege applies here in much the same way as in libel.

The laws of libel and falsehood, as they affect television, have not been tested in the courts to any useful extent, and one must often proceed on the analogy with newspapers and other publications, where there are many cases to cite. Sometimes, the analogies are clear; at other times one can only guess. The following sentence, if true, would not normally be libellous: "Mr. Smith attended the meeting with his wife." If, however, it was spoken in conjunction with a film shot of Mr. Smith, Mr. Jones, it might well become a libel on Mr. Smith, Mrs. Smith, Mr. Jones and Mrs. Jones. Even an unfalsified film scene without commentary might be libellous because of context and implication: a film of a Fascist meeting that included a shot of a non-Fascist politician apparently applauding, nodding, smiling, or giving a salute might well be actionable. A challenging question to someone in an interview might be libellous, even if the material for the question was taken, from a privileged report. "Mr. X, you were described in the Central Criminal court as a thief. What is your reply?" might be actionable. Live television poses the problem of how far a station is responsible for an unexpected libel uttered by someone appearing in a programme. Technically, the station has published the libel, but whether it would be regarded and innocent publication is not clear. No one wants to have a test case, except possibly the lawyers. The price of freedom from damages is eternal vigilance.

Contempt of Court

There are legal restrictions, too, on the reporting of certain events, notably court proceedings. Their main purpose is to prevent unfairness or prejudice against the person accused. The essential thing to remember is that a man is innocent, until proved guilty, and once he is charged with a specific offence it is dangerous to publish anything about him or the offence except the trial proceedings. A seemingly innocent fact prejudice his defence.

The offence here is contempt of court, for which the penalty can be committal to prison by a judge without trial for an unspecified period. Contempt is, therefore, better avoided, and there are some well worn rules and formula for this exercise.

When a crime has been committed, it is perfectly permissible to report it, even with some inaccuracy, so long, of course, as no identifiable person is defamed. One can describe what happened, and describe the criminal's appearance. Sometimes, the police will issue a photograph of a suspect, and name him and this is where the first formula comes in. One must never say, "Bill Sykes, wanted by the police for robbery." The formula is that the police "wish to interview him" or "believe he can help with their inquiries." Variations from the formula are dangerous.

Once an arrest has been made, the whole story must be reviewed, minutely. Nothing must be published that could conceivably prejudice or pre-empt subsequent legal proceedings. One must not say, "Police gave chase, and arrested one of the men." They may, after all, have got the wrong man, and that may be his defence. One says, "Police gave chase. Later, a man was detained." If a man is charged with a crime, any connection between the reporting of this fact and the reporting of the incident itself might prejudice the minds of witness or jury. Sometimes it is wiser to suppress the crime report altogether at this stage, and merely report the charge. A photograph of the arrested man should not be used in case it should influence the mind of a witness called upon to identify, him.

When an accused person appears in court, one may report anything that is said and done in the court, provided it is clear at all times that allegations are allegations and not necessarily facts. The use of the word "alleged" or its synonyms is not a magic charm against libel or contempt; it must be used punctiliously, on a careful assessment of the facts. Any plea or defence put forward by the accused must be reported in its essentials with fairness, and if the defence is reserved until a later date, that fact must be stated, and the defence reported when it is made. A case, once reported, must be followed through to the end. No statement about an accused person's previous bad record or behaviour must be published, even if it emerges in court, until after the verdict. Even after verdict and sentence, some need for caution remains and appeal may clear a man entirely.

Special care must be taken when a case is recounted outside the context of news. Many of the protections allowed to contemporaneous reports do not apply to memoirs of old trials, either in libel or contempt.

Proceedings in a juvenile court may be reported in full, with one exception-names, addresses or anything which might, lead to the identification of the accused by the public. Reporting of divorce and matrimonial cases is restricted to names and addresses of those involved, a concise summary of charges and countercharges in support of which evidence has been called, the result, and anything said by the judge in his summing up. The evidence itself may not be quoted.

No photographs, drawings or other likenesses may be made in a court or within the precincts of a court while it is in session, and the meaning of the word "precincts" has never been defined.

Protection of Minors

Strict Home Office regulations govern the appearance of children of school age in television studios and other places of entertainment, and special permission has to be obtained in advance from the local authority. Curiously enough, it is possible to film children outside the studio without official restriction, but it is always wise to check.

Copyright

Copyright is another complex branch of the law for which every television station will have a person or department responsible, but the producer must know the elements. All creative works automatically belong to the originator during his lifetime, and to his heirs for fifty years afterward. They may not be reproduced or performed in any way without his permission, except in some cases for purposes of news, criticism or review. Films or sound recordings may involve several copyrights simultaneously. The purchase of an original or a copy does not necessarily include the right to reproduce it on television or anywhere else. A film including shots of paintings, sculpture, a dance, or a sound track which has picked up some music, may involve copyright, and the owners of the copyright in news itself; only in the form in which it is presented.

Contracts of various kind will govern the terms and conditions, of work by freelance contributors and some of the material use din current affairs programmes, and although these will be drawn up by the appropriate department, the producer must define, and to some extent negotiate, exactly what he wants and how much he is prepared to pay for it. Union agreements are a form of contract that must be observed, and although the rules can be sent a little when there is mutual confidence it is unwise to go too far in case precedents are set which may create other problems later. In Britain, the editor's and producer's position can sometimes be invidious, in that they may be members of both union and management. Adherence to the letter of the law can be tiresome, but when conflicts arise it can be wiser than too much reliance on common sense and private understandings.

Judgement and Integrity

The need to explain these complicated matters in some detail leave the impression that the producer's life is a nightmare of accountancy, litigation and industrial strife. In fact, with experience, the burdens are carried fairly lightly, and the producer can give most of his time to the business of making programmes. As we have seen, he may not do anything himself directly and it is probably better that he should not. Immersion in the details of programme making can easily obscure the judgement. A man who has spent a day cutting and recutting a difficult film sequence may be left then transferred them from original tape to a clean tape, building up the programme scene by scene.

The next move was to follow the example of the industry by making a cheap copy of the original master a video-cassette with a time coding superimposed on it, in minutes, seconds and 25th of a second. So that individual frames could be numbered and identified. The time absorbing viewing, searching and trial and error of editing can now be carried out on less expensive machines, with editing gadgetry built into them. The edited cassette can then be used as a pattern for the final editing of the master tape, by following the time coding precisely.

The gadgetry for editing both cassettes and master tape is essentially the same. The last scene "laid down" on the second tape is run backwards and forwards until the precise point for ending it is located. The next scene on the first tape is similarly viewed to find the desired starting point. Both outgoing and incoming scenes are visible on separate monitors, side by side. Buttons are pressed to mark the two exact points, and the machines automatically roll backwards a measured distance, then forwards again, and at the marked point the scene from the first tape is transferred to the second. This can be done as a trial edit, and then if acceptable as a definitive edit, laid by pressing the appropriate buttons. Sound can be added or suppressed, laid down before or after the picture is laid down, or at the same time. Dissolves, supers and similar optical effects cannot be done unless three machines are used in conjunction with a vision mixing bank. The method then is to put the two shots at either side of the required dissolve on to two separate machines, arranging them so that when the two machines are run together the playback of the end of the first shot will overlap the beginning of the second. The vision mixer fades the first machine down as he fades the second one up, and the resulting mix is recorded on the third machine.

Tape editing is laborious compared with the simple cut and join of film editing, out the slowness is compensated for by the fact that the edited tape is immediately usable on the air without the delays of negative matching and printing at labs. Techniques, however, will have to develop a lot further before VTR can rival the infinite flexibility and sophistication of film editing, particularly in handling sound tracks parallel with picture.

In spite of all these technicalities, film and VTR editing is not primarily a technical job. It is an art or a craft, not a science, and the film editor's director began their careers in film cutting rooms- David Lean and John Boorman, to name only two. The only way to understand and appreciate the crucial importance of editing is to watch it being done in a cutting room, and absorb through eyes and ears the new language that the twentieth century has discovered a language with its own logic, semantics and grammar, that comes closer to the workings of human memory and imagination than any other form of communication.

APPENDIX 1

NORMS, GUIDELINES AND PROCEDURES FOR SATELLITE COMMUNICATIONS

The Government has approved a policy that envisages allocation of INSAT system capacity for non-governmental users, registration of Indian satellite systems by private Indian companies and limited use of foreign satellites in special circumstances.

The Department of Space (DOS) will be the administrative ministry in all matters related to satellite systems in India. As per the policy, the Indian National Satellite System (INSAT) capacity will be made available to non-government (private) Indian Service Providers on a commercial basis subject to availability after meeting the government needs.

The DOS will allocate INSAT capacity for private users. DOS may also build capacity in INSAT system for private users on request on commercial basis. Private Indian companies with a foreign equity less than 74 per cent are now allowed to establish Indian Satellite Systems.

These companies can submit their applications for registering their satellite systems to the Committee for Authorising the establishment and operation of Indian Satellite Systems (CAISS).

The office of CAISS is set up at the SatCom Programmes Office at ISRO Headquarters, Antariksh Bhavan, New BEL Road, Bangalore-560 094. The authorisation to operate the Satellite System and the Orbit spectrum notification/registration will be done by CAISS.

However, operating licenses for services to be provided by the Indian Satellite Systems will be issued only by the concerned administrative departments like Department of Telecommunication for telecom services and Ministry of Information and Broadcasting for TV/Radio broadcasting.

Foreign satellites will also allowed to be used in special circumstances for satellite communication services in India.

The service licensing departments may allow the use of foreign satellites only in consultation with the Department of Space. If suitable capacity/capability is available in INSAT or Indian Satellite Systems, operations with foreign satellites will not be permitted. For the use of foreign satellites for Internet Service Provider (ISP) gateways, the existing procedures established by Telecom Commission will apply.

APPENDIX 2

GUIDELINES FOR SYNDICATION ARRANGEMENTS BY NEWSPAPERS

All registered newspapers (Indian publications) are authorised to make syndication arrangements for procuring material including photographs, cartoons, crossword puzzles, articles and features from foreign publications (content provider) under automatic approval route subject to the following conditions:

(*i*) The total material so procured and actually printed in an issue of the Indian publication does not exceed 7.5 per cent of the total printed area of that issue,

(*ii*) The syndicated material does not include full copy of the editorial page or the front page of the foreign publication,

(*iii*) The mast head of the content provider publication is not utilised in the Indian publication,

(*iv*) Credit to the content provider is necessarily given prominently as a byline in the Indian publication,

(*v*) The material procured under syndication arrangement is such that has already been published in the content provider publication.

Any case involving relaxation of any of the above conditions would require to be examined by the Ministry of I&B, and, before any material is actually procured under syndication arrangement beyond the above noted conditions, the Indian publication should have applied for and obtained prior approval of the Ministry of I&B.

These guidelines would not apply to the cases where Ministry of I&B has issued its approval/no objection certificate for publication of Indian edition of a foreign magazine/ journal/ newspaper.

APPENDIX 3

GUIDELINES AND GENERAL INFORMATION FOR INTERNET SERVICE PROVIDER (ISP)

GOVERNMENT OF INDIA,
Ministry of Communications, Department of Telecommunications, Telecom Commission

No. 845-51/97-VAS

Invitation of application(s)/proposal(s) for award of licence(s) for providing internet service (ISP—Internet Service Provider Licence).

On behalf of President of India proposals are invited from Registered Indian Companies for providing Internet Service on a licence on non-exclusive basis.

General and Commercial Information

Eligibility Criteria

This invitation is open to any Indian Registered Company. A Company registered in India under the Companies Act, 1956 will be eligible to submit proposal. Licence to run the service will be issued to the proposer company if found eligible and compiles with all the requirements laid down in the application form. Foreign equity, if any, shall be as per the Government policy and guidelines from time to time. At present, the foreign equity is permitted to the extent of 49 per cent. There is no requirement of the applicant company having any prior experience in information technology or telecommunication services.

Service Area

Separate licences shall be granted to any applicant company for each service area. For this purpose, the country has been divided into separate service areas in three categories as mentioned below:

(*i*) *Category "A"*—This covers the territorial jurisdiction of the Union of India except specified areas that may be notified to be excluded from time to time.
(*ii*) *Category "B"*—Any of the 20 Territorial Telecom Circles, four Metro Telephone Districts of Delhi, Mumbai, Kolkata

or Chennai and four major telephone districts of Ahmedabad, Bangalore, Hyderabad or Pune are Category 'B' Service areas. The four Metro Telephone Districts (Delhi, Mumbai, Kolkata & Chennai) are not part of any Telecom Circle, whereas the four major Telephone Districts (Ahmedabad, Bangalore, Hyderabad & Pune) are part of respective Telecom Circle.

(*iii*) *Category "C"*—Any Secondary Switching Area (SSA) of DoT with geographical boundaries as on 1.4.98, will form a separate category "C" Service Area with the exception that each of the four Metro Telephone Districts of Delhi, Mumbai, Kolkata & Chennai and of four major Telephone Districts of Ahmedabad, Bangalore, Hyderabad & Pune of the DoT/MTNL with geographical boundaries as on 1.4.1998, will form a separate Category 'B' service area. Applicants will be required to submit separate application for each service area. The ISP will be required to set up his nodes i.e., Routes/servers within the geographical limits of the service area. An applicant company may be granted any number of licences. Also, there shall be no limit on number of licences that can be granted in a particular service area. The leased line subscribers shall be from within the service area. However, the ISP can offer dial up service from any part of the country. Existing E-Mail and VSAT Service Licensees may also obtain separate ISP Licence for any number of the above mentioned service areas subject to fulfilment of eligibility criteria.

Validity of the Application

Each proposal shall be valid for a minimum period of six months from the date of application.

Processing Fee

The proposer shall enclose a DEMAND DRAFT for Rs. 5,000 (Rupees FIVE Thousand only) in favour of Pay & Accounts Officer, Headquarters, Department of Telecommunications, Sanchar Bhavan, New Delhi-110 001 in respect of each service area, separately with each application towards processing fee. The processing fee is not refundable.

Issue of Licence

Separate licence will be issued for each service area proposed, under relevant provisions of Indian Telegraph Act, 1885, Indian Wireless Telegraphy Act, 1933 and TRAI Act, 1997 and the licensee shall abide by the provisions of the said Acts and the rules made thereunder.

Interconnection with Other Networks

Direct interconnectivity between two separately licensed ISPs shall be permitted. Authorised Public/Government organisations will be allowed to provide INTERNET Gateway access including international leased circuits directly without going through VSNL Gateways. Private ISPs are allowed to provide such International Gateways after obtaining Security clearance for which the Interface of Private ISPs shall only be with the Telecom Authority.

The licensee may obtain the transmission link on lease from DoT, Licensed Basic Service Operators, Railways, State Electricity Boards, National Power Grid Corporation or any other operator specially authorised to lease such lines to the ISPs.

The licensee may also establish its own transmission links within its service area for carrying traffic originated and terminated by his subscribers, provided that such capacities are not available from any other authorised agencies and subject to permission of Telecom Authority. An ISP may provide Internet Service to any VSAT subscriber (who could be served by a shared hub commercial service provider or captive private VSAT network), if the VSAT is located within the service area of the ISP. For this purpose, a direct interconnection of VSAT or VSAT-hub through leased line obtained from an authorised provider to the ISP's node/server shall be permitted only for the flow of Internet traffic.

The existing licence for Closed Users Group Domestic 64 KBPS Data Network via INSAT Satellite Systems does not grant long distance carrier rights to the licensee. The ISP shall provide to the Telecom Authority a monthly statement of VSAT subscribers served with their locations and details of leased line interconnection with the VSAT hub. The VSAT hub, however, need not be located in the service area of the ISP. Resources required for interconnecting the licensee's network to the network of upstream internet access providers (DoT/VSNL etc.) or any other service provider licensed by the Authority including time frame for provision of the same, will be mutually agreed between the parties concerned.

The resources may refer to include but not limited to physical junctions, PCM derived channels, private wires, leased lines, data circuits other network elements. The licensee shall apply for and obtain the network resources from the concerned parties. The tariff of such network is outside the scope of this licence agreement. Licensor will have no obligation for such resources from other parties.

Delivery of the Service

The LICENSEE shall be responsible for installation, testing and commissioning of all the equipment to provide the SERVICE including connectivity to DIAS or GIAS or authorised Public/ Government Organisations for delivery of Internet traffic. The licensee shall provide service within 18 months from the date of signing of the licence agreement. Commissioning of service will mean providing commercial service to customers.

Extension of Licence

The validity of licence is initially for a period of fifteen years unless otherwise terminated. If requested by the licensee, extension may be granted by the TELECOM AUTHORITY on suitable terms and conditions for a period of five years or more at a time. The decision of the TELECOM AUTHORITY shall be final in this regard.

Technical Requirements

Private ISPs shall use IP (Internet Protocol) and shall meet the technical requirements of the Internet Service Providers (DoT/ MTNL/VSNL/other ISPs) to which it is connected. The equipment used by the Private ISP shall be in conformance with the Interface/ Protocol requirements as applicable of the service provider. Some of the interfaces required are given below:

Interface Requirements

(*i*) Subscriber Dial up Access 2 wire access over PSTN for modem interface. 2 wire dial up access on ISDN Basic and Primary rate interfaces.

(*ii*) Leased Line Interface 64K, N x 64K or 2.048 Mb/s, N x 2.048 Mb/s Leased lines. Frame Relay. X.25 ATM G. 703

Access to internet through authorised Cable Operator shall be permitted without additional licensing subject to applicable Cable Laws [The Cable Television Networks (Regulation) Act, 1995] as modified from time to time. 'Last mile' linkages shall be freely permitted within local area either by fibre optic or radio communication for ISPs. In case of radio links, clearance from WPC wing of the DoT shall be required to be obtained by the ISPs to avoid frequency interference.

Quality of Service

The quality of service over internet is not established and defined as yet. As such, the QUALITY OF SERVICE is not being defined for the time being. However, it may be defined at a later date based on the experience gained and inputs from the Internet Engineering Task Force (IETF).

Telephony on the Internet

Telephony on the Internet is not permitted. The licence will be liable for termination for any violation of this clause of the Licence Agreement. The licensee shall also take measures on his own and as and when directed by the Government at his own cost to bar carriage of Telephone Traffic over Internet.

Obscene Material and Applicability of Cyber Laws

Flow of obscene, objectionable, unauthorised or any other content infringing copyrights, intellectual property right and international & domestic Cyber Laws in any form over the ISP's network is not permitted and the ISP is supposed to take such measures as to prevent it. Any damages/claim arising out of default on the part of the licensee in this respect shall be the sole responsibility of the licensee.

IP Address, Domain Name

It will be the responsibility of the licensee to obtain IP address, domain name etc., from the competent authority. In case the IP addresses are taken from the Department of Telecommunications, the same are non-portable and have to be returned to DoT at the termination of connectivity contract.

Financial Conditions

Quantum of Licence Fee and Schedule of Payments

(*i*) The Telecom Authority has decided to waive the Licence Fee for a period up to 31.10.2003. For those ISPs also who obtain licences prior to 01.11.2003, a nominal licence fee of One Rupee per annum will become payable from 01.11.2003.

(*ii*) For access and other charges including MODEM charges payable to the DoT/MTNL/VSNL/other service provider at the prescribed rates, bills will be raised directly by the DoT/MTNL/VSNL/other service provider and shall be a matter between the Licensee and such service provider(s).

Performance Bank Guarantee (PBG)

A PBG of Rs. 2.00 crores for category 'A' Service Area, Rs. 20.00 lakhs for each category 'B' Service Area and Rs. 3.00 lakhs for each category 'C' Service Area valid for two years from any Scheduled Bank in the prescribed form (Schedule 'D' of the draft Licence Agreement) shall be submitted alongwith the application for each service area. The licensee will be liable to extend the validity of Performance Bank Guarantee two months prior to its date of expiry on its own without demand from the Licensor for a further period of one year on year to year basis.

On any failure to do so, the performance bank guarantee will be encashed without giving any notice. This is without prejudice to any other action that may be taken under the terms and conditions of the licence.

Tarrif ISPs

Tarrif ISPs will be free to fix their own tariff. The tariff shall be left open to be decided by market forces. However, the TRAI (Telecom Regulatory Authority of India) may review and fix a tariff at any time during the validity of the licence which shall be binding on the Licensee.

APPENDIX 4

THE PRASAR BHARATI (BROADCASTING CORPORATION OF INDIA) ACT, 1990

An Act to provide for the establishment of a Broadcasting Corporation for India, to be known as Prasar Bharati, to define its composition, functions and powers and to provide for matters connected therewith or incidental thereto.

CHAPTER I

PRELIMINARY

1. Short Title, Extent and Commencement: (1) This Act may be called the Prasar Bharati (Broadcasting Corporation of India) Act, 1990.

(2) It extends to the whole of India.

(3) It shall come into force on such date as the Central Government may, by notification, appoint.

2. Definitions: In this Act, unless the context otherwise requires,—

(*a*) "Akashvani" means the offices, stations and other establishments, by whatever name called, which, immediately before the appointed day, formed part of or were under the Director-General, All India Radio of the Union Ministry of Information and Broadcasting;

(*b*) "appointed day" means the date appointed under Section 3;

(*c*) "broadcasting" means the dissemination of any form of communication like signs, signals, writing, pictures, images and sounds of all kinds by transmission of electro-magnetic waves through space or through cables intended to be received by the general public either directly or indirectly through the medium of relay stations and all its grammatical variations and cognate expression shall be constructed accordingly;

(*d*) "Board" means the Prasar Bharati Board;

(*e*) "Broadcasting Council" means the Council established under Section 14;

(*f*) "Chairman" means the Chairman of the Corporation appointed under Section 4;

(*g*) "Corporation" means the Prasar Bharati (Broadcasting Corporation of India) established under Section 3;

(*h*) "Doordarshan" means the offices, kendras and other establishments, by whatever name called, which, immediately before the appointed day, formed part of or were under the Directorate-General, Doordarshan of the Union Ministry of Information and Broadcasting;

(*i*) "Elected Member" means a Member elected under Section 3;

(*j*) "Executive Member" means the Executive Member appointed under Section 4;

(*k*) "Kendra" means telecasting centre with studios or transmitters or both and includes a relay station;

(*l*) "Member" means a Member of the Board;

(*m*) "Member (Finance)" means the Member (Finance) appointed under Section 4;

(*n*) "Member (Personnel)" means the Member (Personnel) appointed under Section 4;

(*o*) "Nominated Member" means the Member nominated by the Union Ministry of Information and Broadcasting under Section 3;

(*p*) "Non-lapsable Fund" means the Fund created from the commercial revenues of Akashvani and Doordarshan to meet expenditure on certain schemes;

(*q*) "Notification" means a notification published in the official Gazette;

(*r*) "Part-time Member" means a Part-time Member of the Board appointed under Section 4, but does not include an Ex-Officio Member, the Nominated Member or an Elected Member;

(*s*) "Prescribed" means prescribed by rules made under this Act;

(*t*) "Recruitment Board" means a board established under sub-section (1) of Section 10;

(*u*) "Regulations" means regulations made by the Corporation under this Act;

(*v*) "Station" means any broadcasting station with studios or transmitters or both and includes a relay station;

(*w*) "Wholetime Member" means the Executive Member, Member (Finance) or Member (Personnel);

(*x*) "Year" means the financial year.

CHAPTER II
PRASAR BHARATI
(BROADCASTING CORPORATION OF INDIA)

3. Establishment and Composition of Corporation: (1) With effect from such date as the Central Government may by notification appoint in this behalf, there shall be established for the purposes of this Act a Corporation, to be known as the Prasar Bharati (Broadcasting Corporation of India).

(2) The Corporation shall be a body corporate by the name aforesaid, having perpetual succession and a common seal with power to acquire, hold and dispose of property, both movable and immovable, and to contract, and shall by the said name sue and be sued.

(3) The Headquarters of the Corporation shall be at New Delhi and the Corporation may establish offices, kendras or stations at other places in India and, with the previous approval of the Central Government, outside India.

(4) The General Superintendence, direction and management of the affairs of the Corporation shall vest in the Prasar Bharati Board which may exercise all such powers and do all such acts and things as may be exercised or done by the Corporation under this Act.

(5) The Board shall consist of—

(*a*) a Chairman;
(*b*) one Executive Member;
(*c*) one Member (Finance);
(*d*) one Member (Personnel);
(*e*) six Part-time Members;
(*f*) Director-General (Akashvani), ex-officio;
(*g*) Director-General (Doordarshan), ex-officio;
(*h*) one representative of the Union Ministry of Information and Broadcasting, to be nominated by that Ministry; and
(*i*) two representatives of the employees of the Corporation, of whom one shall be elected by the Engineering Staff from amongst themselves and one

shall be elected by the other employee from amongst themselves.

(6) The Corporation may appoint such committees as may be necessary for the efficient performance, exercise and discharge of its functions, powers and duties:

Provided that all or a majority of the members of each committee shall be Members and a member of any such committee who is not a Member shall have only the right to attend meetings of the committee and take part in the proceedings thereof, but shall not have the right to vote.

(7) The Corporation may associate with itself, in such manner and for such purposes as may be provided by regulations, any person whose assistance or advice it may need in complying with any of the provisions of this Act and a person so associated shall have the right to take part in the discussions of the Board relevant to the purposes for which he has been associated, but shall not have the right to vote.

(8) No act or proceeding of the Board or of any committee appointed by it under sub-section (6) shall be invalidated merely by reason of—

(*a*) any vacancy in, or any defect in the constitution of, the Board or such committee; or

(*b*) any defect in the appointment of a person acting as a Member or a member of such committee; or

(*c*) any irregularity in the procedure of the Board or such committee not affecting the merits of the case.

4. Appointment of Chairman and Other Members: (1) The Chairman and the other Members, except the ex-officio Members, the Nominated Member and the elected Members shall be appointed by the President of India on the recommendation of a committee consisting of—

(*a*) the Chairman of the Council of States, who shall be the Chairman of the Committee;

(*b*) the Chairman of the Press Council of India established under Section 4 of the Press Council Act, 1978; and

(*c*) one nominee of the President of India.

(2) No appointment of a Member shall be invalidated merely by reason of any vacancy in, or any defect in the constitution of, the committee appointed under sub-section (1).

(3) The Chairman and the Part-time Members shall be persons of eminence in Public life; the Executive Member shall be a person

having special knowledge or practical experience in respect of such matters as administration, management, broadcasting, education, literature, culture, arts, music, dramatics or journalism; the Member (Finance) shall be person having special knowledge or practical experience in respect of financial matters and the Member (Personnel) shall be a person having special knowledge or practical experience in respect of personnel management and administration.

(4) The recommendations made by the committee constituted under sub-section (1) shall be binding for the purposes of appointments under this section.

5. Powers and Functions of Executive Member: (1) The Executive Member shall be the Chief Executive of the Corporation and shall, subject to the control and supervision of the Board, exercise such power and discharge such functions of the Board as it may delegate to him.

6. Term of Office, Conditions of Service, etc., of Chairman and Other Members: (1) The Chairman shall be Part-time Member and shall hold office for a term of six years from the date on which he enters upon his office.

(2) The Executive Member, the Member (Finance) and Member (Personnel) shall be Wholetime Members and every such Member shall hold office for a term of six years from the date on which he enters upon his office or until he attains the age of sixty-two years whichever is earlier.

(3) The term of office of Part-time Members shall be six years, but one-third of such Members shall retire on the expiration of every second year.

(4) The term of office of an elected Member shall be two years or till he ceases to be an employee of the Corporation, whichever is earlier.

(5) As soon as may be after the establishment of the Corporation, the President of India may, by order, make such provision as he thinks fit for curtailing the term of office of some of the Part-time Members then appointed in order that one-third of the Members holding office as such Part-time Members shall retire in every second year thereafter.

(6) Where before the expiry of the term of office of a person holding the office of Chairman, or any other Member, a vacancy arises, for any reason whatsoever, such vacancy shall be deemed to be a casual vacancy and the person appointed or elected to fill

such vacancy shall hold office for the unexpired period of the term for which his predecessor in office would have held office if such vacancy had not arisen.

(7) The Wholetime Members shall be the employees of the Corporation and as such shall be entitled to such salaries and allowances and shall be subject to such conditions of service in respect of leave, pension (if any), provident fund and other matters as may be prescribed:

Provided that the salaries and allowances and the conditions of service shall not be varied to their disadvantage after their appointment.

(8) The Chairman and Part-time Members shall be entitled to such allowances as may be prescribed.

7. Removal and Suspension of Chairman and Members: (1) Subject to the provisions of sub-section (3), the Chairman or any other Member, except an ex-officio Member, the Nominated Member and an elected Member shall only be removed from his office by order of the President of India on the ground of misbehaviour after the Supreme Court, on a reference being made to it by the President, has, on inquiry held in accordance with such procedure as the Supreme Court may by rules provide, reported that the Chairman or such other member, as the case may be, ought, on such ground, be removed.

(2) The President may suspend from office the Chairman or other Member, except an ex-officio Member, the Nominated Member or an elected Member, in respect of whom a reference has been made to the Supreme Court under sub-section (1) until the president has passed orders on receipt of the report of the Superme Court on such reference.

(3) Notwithstanding anything contained in sub-section (1), the President may, by order, remove the Chairman or any Wholetime Member from his office if such Chairman or such Wholetime Member—

(*a*) ceases to be a citizen of India; or

(*b*) is adjudged an insolvent; or

(*c*) engages during his term of office in any paid employment outside the duties of his office; or

(*d*) is convicted of any offence involving moral turpitude; or

(*e*) is, in the opinion of the President, unfit to continue in office by reason of infirmity of body or mind:

Provided that the President may, by order, remove any part-time Member from his office if he is adjudged an insolvent or is convicted of any offence involving moral turpitude or where he is, in the opinion of the President, unfit to continue in office by reason of infirmity of body or mind.

(4) If the Chairman or any Wholetime Member, except any ex-officio Member, the Nominated Member or any elected Member, is, or becomes in any way concerned or interested in any contract or agreement made by or on behalf of the Corporation or the Government of India or the Government of a State or, participates in any way in the profit thereof, or in any benefit or emolument arising therefrom than as a member, and in common with other members of an incorporated company, he shall, for the purposes of sub-section (1), be deemed to be guilty of misbehaviour.

(5) If a Part-time Member is, or becomes in any way concerned, or interested in any contract, or agreement made by or on behalf of the Corporation, he shall, for the purposes of sub-section (1), be deemed to be guilty of misbehaviour.

(6) The Chairman or any other Member may resign his office by giving notice thereof in writing to the President of India and on such resignation being accepted, the Chairman or other Member shall be deemed to have vacated his office.

8. Meetings of Board: (1) The Board shall meet at such times and places and shall observe such rules of procedure in regard to the transaction of business at its meetings (including the quorum at meetings) as may be provided by regulations:

Provided that there shall not be less than six meetings every year but three months shall not intervene between one meeting and the next meeting.

(2) A Member shall be deemed to have vacated his office if he absents himself for three consecutive meetings of the Board without the leave of the Chairman.

(3) The Chairman shall preside at the meetings of the Board and if for any reason he is unable to attend any meeting, the Executive Member and in the absence of both, any other Member elected by the Members present at such meeting, shall preside at the meeting.

(4) All questions which come up before any meeting of the Board shall be decided by a majority of the votes of the Members present and voting and, in the event of an equality of votes, the

Chairman, or in his absence, the person presiding, shall have and exercise a second or casting vote.

9. Officers and Other Employees of Corporation: (1) Subject to such control, restrictions and conditions as may be prescribed, the Corporation may appoint, after consultation with the Recruitment Board, the Director-General (Akashvani), the Director-General (Doordarshan) and such other officers and other employees as may be necessary.

(2) The method of recruitment of such officers and employees and all other matters connected therewith and the conditions of service of such officers and other employees shall be such as may be provided by regulations.

10. Establishment of Recruitment Boards: (1) The Corporation shall, as soon as may be, after the appointed day and in such manner and subject to such conditions and restrictions as may be prescribed, establish for the purpose of Section 9, one or more Recruitment Boards consisting wholly of persons other than the Members, Officers and other Employees of the Corporation:

Provided that for the purposes of Appointment to the posts carrying scales of pay which are not less than that of a Joint Secretary to the Central Government, the Recruitment Board shall consist of the Chairman, other Members, the Ex-officio Members, the Nominated member and the elected Members.

(2) The qualifications and other conditions of service of the members constituting the Recruitment Board and the period for which such members shall hold office, shall be such as may be prescribed.

11. Transfer of Service of Existing Employees to Corporation: (1) Where the Central Government has ceased to perform any functions which under Section 12 are the functions of the Corporation, it shall be lawful for the Central Government to transfer, by order and with effect from such date or dates as may be specified in the order, to the Corporation any of the officers or other employees serving in the Akashvani or Doordarshan and engaged in the performance of those functions:

Provided that no order under this sub-section shall be made in relation to any officer or other employee in the Akashvani or Doordarshan who has, in respect of the proposal of the Central Government to transfer such officer or other employee to the

Corporation, intimated within such time as may be specified in this behalf by the Central Government, his intention of not becoming an employee of the Corporation.

(2) The provisions of sub-section (1) shall also apply to the members of the Indian Information Service, the Central Secretariat Service or any other service or to persons borne on cadres outside Akashvani and Doordarshan who have been working in Akashvani or Doordarshan immediately before the appointed day:

Provided that where any such member intimates, within the time specified in sub-section (1), his intention of not becoming an employee of the Corporation but to continue on deputation, he may be allowed to continue on deputation in accordance with such terms and conditions as may be prescribed.

(3) In making an order under sub-section (1), the Central Government shall, as far as may be, take into consideration the functions which the Akashvani or, as the case may be, Doordarshan has ceased or ceases to perform and the area in which such functions have been or are performed.

(4) An officer or other employee transferred by an order under sub-section (1) shall, on and from the date of transfer, cease to be an employee of the Central Government and become an employee of the Corporation with such designation as the Corporation may determine and shall, subject to the provisions of sub-sections (5) and (6), be governed by such regulations as may be made as respects remuneration and other conditions of service including pension, leave and provident fund and shall continue to be an officer or other employee of the Corporation unless and until his employment is terminated by the Corporation.

(5) Every officer or other employee transferred by an order made under sub-section (1) shall, within six months from the date of transfer, exercise his option, in writing, to be governed—

(*a*) by the scale of pay applicable to the post held by him in the Akashvani or Doordarshan immediately before the date of transfer or by the scale applicable to the post under the Corporation to which he is transferred;

(*b*) by the leave, provident fund, retirement of other terminal benefits admissible to employees of the Central Government in accordance with the rules or orders of the Central Government, as amended from time to time, or leave, provident fund or other terminal benefits admissible to the employees of the Corporation under the regulation, and such option once exercised under this Act shall be final:

Provided that the option exercised under clause (a) by an officer or other employee shall be applicable only in respect of the post under the Corporation to which such officer or other employee is transferred and on appointment to a higher post under the Corporation he shall be eligible only for the scale of pay applicable to such higher post:

Provided further that if immediately before the date of his transfer any such officer or other employee is officiating in a higher post under the Government either in a leave vacancy or any other vacancy of a specified duration, his pay on transfer shall be protected for the unexpired period of such vacancy and thereafter he shall be entitled to the scale of pay applicable to the post under the Government to which he would have reverted or to the scale of pay applicable to the post under the Corporation to which he is transferred, whichever he may opt:

Provided also that when an officer or other employee serving in the Union Ministry of Information and Broadcasting or in any of its attached or subordinate officers is promoted to officiate in a higher post in the Ministry or office subsequent to the transfer to the Corporation of any other officer or employee senior to him in that Ministry or office before such transfer, the officer or other employee who is promoted to officiate in such higher post shall, on transfer to the Corporation, be entitled only to the scale of pay applicable to the post he would have held but for such promotion or the scale of pay applicable to the post under the Corporation to which he is transferred, whichever he may opt.

(6) No officer or other employee transferred by an order made under sub-section (1) or sub-section (2),—

(*a*) shall be dismissed or removed by an authority subordinate to that competent to make a similar or equivalent appointment under the Corporation as may be specified in the regulations;

(*b*) shall be dismissed or removed or reduced in rank except after an inquiry in which he has been informed of the charges against him and given a reasonable opportunity of being heard in respect of those charges:

Provided that where it is proposed after such inquiry to impose upon him any such penalty, such penalty may be imposed on the basis of evidence adduced during such inquiry and it shall not be necessary to give such person an opportunity of making representation on the proposed penalty:

Provided further that clause (b) shall not apply where an officer or other employee is dismissed or removed or reduced in rank on the ground of conduct which has led to his conviction on a criminal charge.

12. Functions and Powers of Corporation: (1) Subject to the provisions of this Act, it shall be the primary duty of the Corporation to organise and conduct public broadcasting services to inform, educate and entertain the public and to ensure a balanced development of broadcasting on radio and television.

Explanation: For the removal of doubts, it is hereby declared that the provisions of this section shall be in addition to, and not in derogation, of the provisions of the Indian Telegraph Act, 1885.

(2) The Corporation shall, in the discharge of its functions, be guided by the following objectives, namely—

(*a*) upholding the unity and integrity of the country and the values enshrined in the Constitution;

(*b*) safeguarding the citizen's right to be informed freely, truthfully and objectively on all matters of public interest, national or international, and presenting a fair and balanced flow of information including contrasting views without advocating any opinion or ideology of its own;

(*c*) paying special attention to the fields of education and spread of literacy, agriculture, rural development, environment, health and family welfare and science and technology;

(*d*) providing adequate coverage to the diverse cultures and languages of the various regions of the country by broadcasting appropriate programmes;

(*e*) providing adequate coverage to sports and games so as to encourage healthy competition and the spirit of sportsmanship;

(*f*) providing appropriate programmes keeping in view the special needs of the youth;

(*g*) informing and stimulating the national consciousness in regard to the status and problems of women and paying special attention to the upliftment of women;

(*h*) promoting social justice and combating exploitation, inequality and such evils as untouchability and advancing the welfare of the weaker sections of the society;

(*i*) safeguarding the rights of the working classes and advancing their welfare;

(*j*) serving the rural and weaker sections of the people and those residing in border regions, backward or remote areas;

(*k*) providing suitable programmes keeping in view the special needs of the minorities and tribal communities;

(*l*) taking special steps to protect the interests of children, the blind, the aged, the handicapped and other vulnerable sections of the people;

(*m*) promoting national integration by broadcasting in a manner that facilitates communication in the languages in India; and facilitating the distribution of regional broadcasting services in every State in the languages of that State;

(*n*) providing comprehensive broadcast coverage through the choice of appropriate technology and the best utilisation of the broadcast frequencies available and ensuring high quality reception;

(*o*) promoting research and development activities in order to ensure that radio and television broadcast technology are constantly updated; and

(*p*) expanding broadcasting facilities by establishing additional channels of transmission at various levels.

(3) In particular, and without prejudice to the generality of the foregoing provisions, the Corporation may take such steps as it thinks fit—

(*a*) to ensure that broadcasting is conducted as a public service to provide and produce programmes;

(*b*) to establish a system for the gathering of news for radio and television;

(*c*) to negotiate for purchase of, or otherwise acquire, programmes and rights or privileges in respect of sports and other events, films, serials, occasions, meetings, functions or incidents of public interest, for broadcasting and to establish procedures for the allocation of such programmes, rights or privileges to the services;

(*d*) to establish and maintain a library or libraries of radio, television and other materials;

(*e*) to conduct or commission, from time to time, programmes, audience research, market or technical service, which may be released to such persons and in such manner and subject to such terms and conditions as the Corporation may think fit;

(*f*) to provide such other services as may be specified by regulations.

(4) Nothing in sub-sections (2) and (3) shall prevent the Corporation from managing on behalf of the Central Government and in accordance with such terms and conditions as may be specified by that Government the broadcasting of External Services and monitoring of broadcasts made by organisations outside India on the basis of arrangements made for reimbursement of expenses by the Central Government.

(5) For the purposes of ensuring that adequate time is made available for the promotion of the objectives set out in this section, the Central Government shall have the power to determine the maximum limit of broadcast time in respect of the advertisement.

(6) The Corporation shall be subject to no civil liability on the ground merely that it failed to comply with any of the provisions of this section.

(7) The Corporation shall have power to determine and levy fees and other service charges for or in respect of the advertisements and such programmes as may be specified by regulations:

Provided that the fees and other service charges levied and collected under this sub-section shall not exceed such limits as may be determined by the Central Government, from time to time.

13. Parliamentary Committee: (1) There shall be constituted a Committee consisting of twenty-two Members of Parliament, of whom fifteen from the House of the People to be elected by the Members thereof and seven from the Council of States to be elected by the Members thereof in accordance with the system of proportional representation by means of the single transferable vote, to oversee that the Corporation discharges its functions in accordance with the provision of this Act and, in particular, the objectives set out in Section 12 and submit a report thereon to Parliament.

(2) The Committee shall function in accordance with such rules as may be made by the Speaker of the House of the People.

14. Establishment of Broadcasting Council, Term of Office and Removal, etc., of Members Thereof: (1) There shall be established, by notification, as soon as may be after the appointed day, a Council, to be known as the Broadcasting Council, to receive and consider complaints referred to in Section 15 and to advise the Corporation in the discharge of its functions in accordance with the objectives set out in Section 12.

(2) The Broadcasting Council shall consist of—

(*i*) a President and ten other members to be appointed by the President of India from amongst persons of eminence in public life;

(*ii*) four Members of Parliament, of whom two from the House of the People to be nominated by the Speaker thereof and two from the Council of States to be nominated by the Chairman thereof.

(3) The President of the Broadcasting Council shall be a wholetime member and every other member shall be a part-time member and the President or the part-time member shall hold office as such for a term of three years from the date on which he enters upon his office.

(4) The Broadcasting Council may constitute such number of Regional Councils as it may deem necessary to aid and assist the Council in the discharge of its functions.

(5) The President of the Broadcasting Council shall be entitled to such salary and allowances and shall be subject to such conditions of service in respect of leave, pension (if any), provident fund and other matters as may be prescribed.

Provided that the salary and allowances and the conditions of service shall not be varied to the disadvantage of the President of the Broadcasting Council after his appointment.

(6) The other members of the Broadcasting Council and the members of the Regional Councils constituted under sub-section (4) shall be entitled to such allowances as may be prescribed.

15. Jurisdiction of, and the Procedure to be Followed by, Broadcasting Council: (1) The Broadcasting Council shall receive and consider complaints from—

(*i*) any person or group of persons alleging that a certain programme or broadcast or the functioning of the Corporation in specific cases or in general is not in accordance with the objectives for which the Corporation is established;

(*ii*) any person (other than officer or employee of the Corporation) claiming himself to have been treated unjustly or unfairly in any manner (including unwarranted invasion of privacy, misrepresentation, distortion or lack of objectivity) in connection with any programme broadcast by the Corporation.

(2) A complaint under sub-section (1) shall be made in such manner and within such period as may be specified by regulations.

(3) The Broadcasting Council shall follow such procedure as it thinks fit for the disposal of complaints received by it.

(4) If the complaint is found to be justified either wholly or in part, the Broadcasting Council shall advise the Executive Member to take appropriate action.

(5) If the Executive Member is unable to accept the recommendation of the Broadcasting Council, he shall place such recommendation before the Board for its decision thereon.

(6) If the Board is also unable to accept the recommendation of the Broadcasting Council, it shall record its reasons therefore and inform the Broadcasting Council accordingly.

(7) Notwithstanding anything contained in sub-sections (5) and (6), where the Broadcasting Council deems it appropriate, it may, for reasons to be recorded in writing, require the Corporation to broadcast its recommendations with respect to a complaint in such manner as the Council may deem fit.

CHAPTER III

ASSETS, FINANCES AND ACCOUNTS

16. Transfer of Certain Assets, Liabilities, etc., of Central Government to Corporation: As from the appointed day—

(*a*) all property and assets (including the Non-lapsable Fund) which immediately before that day vested in the Central Government for the purpose of Akashvani or Doordarshan or both shall stand transferred to the Corporation on such terms and conditions as may be determined by the Central Government and the book value of all such property and assets shall be treated as the capital provided by the Central Government to the Corporation;

(*b*) all debts, obligations and liabilities incurred, all contracts entered into and all matters and things engaged to be done by, with or for the Central Government immediately before such day for or in connection with the purposes of Akashvani or Doordarshan or both shall be deemed to have been incurred, entered into and engaged to be done by, with or for the Corporation;

(*c*) all sums of money due to the Central Government in relation to the Akashvani or Doordarshan or both immediately before such day shall be deemed to be due to the Corporation;

(*d*) all suits and other legal proceedings instituted or which could have been instituted by or against Central Government immediately before such day for any matter in relation to the Akashvani or Doordarshan or both may be continued or instituted by or against the Corporation.

17. Grants, etc., by Central Government: For the purposes of enabling the Corporation to discharge its functions efficiently under this Act, the Central Government may, after due appropriation made by Parliament by law in this behalf, pay to the Corporation in each financial year—

(*i*) the proceeds of the broadcast receiver licence fees, if any, as reduced by the collection charges; and

(*ii*) such other sums of money as that Government considers necessary, by way of equity, grant-in-aid or loan.

18. Fund of Corporation: (1) The Corporation shall have its own Fund and all the receipts of the Corporation (including the amounts which stand transferred to the Corporation under Section 16) shall be credited to the Fund and all payments by the Corporation shall be made therefrom.

(2) All moneys belonging to the Fund shall be deposited in one or more nationalised banks in such manner as the Corporation may decide.

(3) The Corporation may spend such sums as it thinks fit for performing its functions under this Act and such sums shall be treated as expenditure payable out of the Fund of the Corporation.

Explanation: For the purposes of the section, "nationalised bank" means a corresponding new bank specified in the First Schedule to the Banking Companies (Acquisition and Transfer of Undertakings)

Act, 1970 or a corresponding new bank specified in the First Schedule to the Banking Companies (Acquisition and Transfer of Undertakings) Act, 1980.

19. Investment of Moneys: The Corporation may invest its moneys in the securities of the Central Government or any State Government or in such other manner as may be prescribed.

20. Annual Financial Statement of the Corporation: (1) The Corporation shall prepare, in each financial year, an Annual Financial Statement for the next financial year showing separately—

- (*a*) the expenditure which is proposed to be met from the internal resources of the Corporation; and
- (*b*) the sums required from the Central Government to meet other expenses and distinguishing—
  - (*i*) revenue expenditure from other expenditure; and
  - (*ii*) non-plan expenditure from plan expenditure.

(2) The Annual Financial Statement shall be prepared in such form and forwarded at such time to the Central Government for its approval as may be agreed to by that Government and the Corporation.

21. Accounts and Audit of Corporation: (1) The Corporation shall maintain proper accounts and other relevant records and prepare an annual statement of accounts in such form and in such manner as may be prescribed.

(2) The accounts of the Corporation shall be audited by the Comptroller and Audio-General of India at such intervals as may be specified by him and any expenditure incurred in connection with such audit shall be payable by the Corporation to the Comptroller and Auditor-General.

(3) The Comptroller and Auditor-General and any person appointed by him in connection with the audit of the accounts of the Corporation shall have the same rights and privileges and authority in connection with such audit as the Comptroller and Auditor-General has in connection with the audit of Government accounts and, in particular, shall have the right to demand the production of books, accounts, connected vouchers and other documents and papers and to inspect any of the offices of the Corporation.

(4) The accounts of the Corporation as certified by the Comptroller and Auditor-General of India or any other person appointed by him in this behalf together with the audit report

thereon shall be forwarded annually to the Central Government and that Government shall cause the same to be laid before each House of Parliament.

22. Corporation not Liable to be Taxed: Notwithstanding anything contained in the Income-Tax Act, 1961, or any other enactment for the time being in force relating to income-tax or any other tax on income, profits or gains, the Corporation shall not be liable to pay any income-tax or any other tax in respect of—

(*a*) any income, profit or gains, accruing or arising out of the Fund of the Corporation or any amount received in that Fund; and

(*b*) any income, profits or gains, derived or any amount received, by the Corporation.

CHAPTER IV

MISCELLANEOUS

23. Power of Central Government to Give Directions: (1) The Central Government may, from time to time as and when occasion arises, issue to the Corporation such directions as it may think necessary in the interests of the sovereignty, unity and integrity of India or the security of the State or preservation of public order requiring it not to make a broadcast on a matter specified in the direction or to make a broadcast on any matter of public importance specified in the direction.

(2) Where the corporation makes a broadcast in pursuance of the direction issued under sub-section (1), the fact that such broadcast has been made in pursuance of such direction may also be announce along with such broadcast, if the Corporation so desires.

(3) A copy of every direction issued under sub-section (1) shall be laid before each House of Parliament.

24. Power of Central Government to Obtain Information: The Central Government may require the Corporation to furnish such information as that Government may consider necessary.

25. Report to Parliament in Certain Matters and Recommendations as to Action Against the Board: (1) Where the Board persistently makes default in complying with any directions issued under Section 23 or fails to supply the information required under Section 24, the Central Government may prepare a report thereof and lay it before each House of Parliament for any recommendation thereof as to any action (including supersession of the Board) which may be taken against the Board.

(2) On the recommendation of the Parliament, the President may by notification supersede the Board for such period not exceeding six month, as may be specified in the notification:

Provided that before issuing the notification under this subsection, the President shall give a reasonable opportunity to the Board to show cause as to why it should not be superseded and shall consider the explanations and objections, if any, of the Board.

(3) Upon the publication of the notification under sub-section (2)—

(*a*) all the Members shall, as from the date supersession, vacate their offices as such;

(*b*) all the powers, functions and duties which may, by or under the provision of this Act be exercised or discharged by or on behalf of the Board, shall until the Board is reconstituted under this Act, be exercised and discharged by such person or persons as the President may direct.

(4) On the expiration of the period of supersession specified in the notification issued under sub-section (2), the President may reconstitute the Board by fresh appointments, and in such a case any person who had vacated his office under clause (a) of subsection (3) shall not be disqualified for appointment:

Provided that the President may, at any time before the expiration of the period of supersession, take action under this sub-section.

(5) The Central Government shall cause the notification issued under sub-section (2) and a full report of the action taken under this section to be laid before each House of Parliament.

26. Office of Member not to Disqualify a Member of Parliament: It is hereby declared that the office of the member of the Broadcasting Council or of the Committee constituted under Section 13 shall not disqualify its holder for being chosen as or for being a member of either House of Parliament.

27. Chairman, Members, etc., to be Public Servants: The Chairman and every other Member, every officer or other employee of the Corporation and every member of a Committee thereof, the President and every member of the Broadcasting Council or every member of a Regional Council or a Recruitment Board shall be deemed to be a public servant within the meaning of Section 21 of the Indian Penal Code.

28. Protection of Action Taken in Good Faith: No suit or other legal proceeding shall lie against the Corporation, the Chairman or any Member or officer or other employee thereof or the President or a member of the Broadcasting Council or a member of a Regional Council or a Recruitment Board for anything which is in good faith done or intended to be done in pursuance of this Act or of any rules or regulations made thereunder.

29. Authentication of Orders and Other Instruments of Corporation: All orders and decisions of the Corporation shall be authenticated by the signature of the Chairman or any other Member authorised by the Corporation in this behalf and all other instruments executed by the Corporation shall be authenticated by the signature of the Executive Member or by any officer of the Corporation authorised by him in this behalf.

30. Delegation of Powers: The Corporation may, by general or special order, delegate to the Chairman or any other Member or to any officer of the Corporation, subject to such conditions and limitations, if any, as may be specified therein, such of its powers and duties under this Act as it may deem fit.

31. Annual Report: (1) The Corporation shall prepare once in every calendar year, in such form and within such times as may be prescribed, an annual report giving a full account of its activities (including the recommendations and suggestions made by the Broadcasting Council and the action taken thereon) during the previous year and copies thereof shall be forwarded to the Central Government and that Government shall cause the same to be laid before each House of Parliament.

(2) The Broadcasting Council shall prepare once in every calendar year, in such form and within such time as may prescribed, an annual report giving a full account of its activities during the previous year and copies thereof shall be forwarded to the Central Government and that Government shall cause the same to be laid before each House of Parliament.

32. Power to Make Rules: (1) The Central Government may, by notification, make rules for carrying out the provisions of this Act.

(2) In particular, and without prejudice to generality of the foregoing power, such rules may provide for all or any of the following matters, namely—

(*a*) the salaries and allowances and conditions of service in respect of leave, pension (if any), provident fund and other matters in relation to the Wholetime Members under sub-section (7) of Section 6;

(*b*) the allowances payable to the Chairman and Part-time Members under sub-section (8) of Section 6;

(*c*) the control, restrictions and conditions subject to which the Corporation may appoint officers and other employees under sub-section (1) of Section 9; the manner in which and the conditions and restrictions subject to which a Recruitment Board may be established under sub-section (1) of Section 10;

(*d*) the qualification and other conditions of service of the members of a Recruitment Board and their period of office under sub-section (2) of Section 10;

(*e*) the terms and conditions in accordance with which the deputation may be regulated under sub-section (2) of Section 11;

(*f*) the salary and allowances and conditions of service in respect of leave, pension (if any), provident fund and other matters in relation to the President of the Broadcasting Council under sub-section (5) of Section 14;

(*g*) the allowances payable to other members of the Broadcasting Council and the members of the Regional Councils, under sub-section (6) of Section 14;

(*h*) the manner in which the Corporation may invest its moneys under Section 19;

(*i*) the form and the manner in which the annual statement of accounts shall be prepared under sub-section (1) of Section 21;

(*j*) the form in which, and the time within which the Corporation and the Broadcasting Council shall prepare their annual report under Section 31;

(*k*) any other matter which is required to be, or may be, prescribed.

33. Power to Make Regulations: (1) the Corporation may, by notification, make regulations not inconsistent with this Act and the rules made thereunder for enabling it to perform its functions under this Act.

(2) Without prejudice to the generality of the foregoing power such regulations may provide for all or/any of the following matters, namely—

- (*a*) the manner in which and the purposes for which the Corporation may associate with itself any person under sub-section (7) of Section 3;
- (*b*) the times and places at which meetings of Board shall be held and, the procedure to be followed thereat, and the quorum necessary for the transaction of the business at a meeting of the Board under sub-section (1) of Section 8;
- (*c*) the methods of recruitment and conditions of service of officers and other employees of the Corporation under sub-section (2) of Section 9;
- (*d*) the remuneration and other conditions of service, including pension, leave and provided fund in relation to an officer or other employee of the Corporation under sub-section (4) of Section 11;
- (*e*) the authority competent to make certain appointments referred to in clause (a) of sub-section (6) of Section 11;
- (*f*) the services which may be provided by the Corporation under clause (f) of sub-section (3) of Section 12;
- (*g*) the determination and levy of fees and other service charges in respect of advertisements and other programmes under sub-section (7) of Section 12;
- (*h*) the manner in which and the period within which complaints may be made under sub-section (2) of Section 15;
- (*i*) any other matter in respect of which provision is, in the opinion of the Corporation, necessary for the performance of its functions under this Act:

Provided that the regulations under clause (c) or clause (d) shall be made only with the prior approval of the Central Government.

34. Rules and Regulations to be Laid before Parliament: Every rule and every regulation made under this Act shall be laid as soon as may be after it is made, before each House of Parliament, while it is in session for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and if, before the expiry of the session immediately following the session or the successive session aforesaid, both Houses agree in making any modification in the rule or regulation, or both Houses agree that the rule or regulation should not be made, the rule or regulation shall thereafter have effect only in such modified form or be of no effect, as the case may be; so, however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule or regulation.

35. Power to Remove Difficulties: If any difficulty arises in giving effect to provisions of this Act, the Central Government may, by order, published in the official Gazette, make such provisions, not inconsistent with the provisions of this Act, as it may deem necessary, for the removal of the difficulty:

Provided that no such order shall be made after the expiry of a period of three years from the appointed day.

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